The OIL WEEKLY

15¢

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

EBRUARY 25, 1935
ne 76 Number 11

California—Oklahoma—Texas

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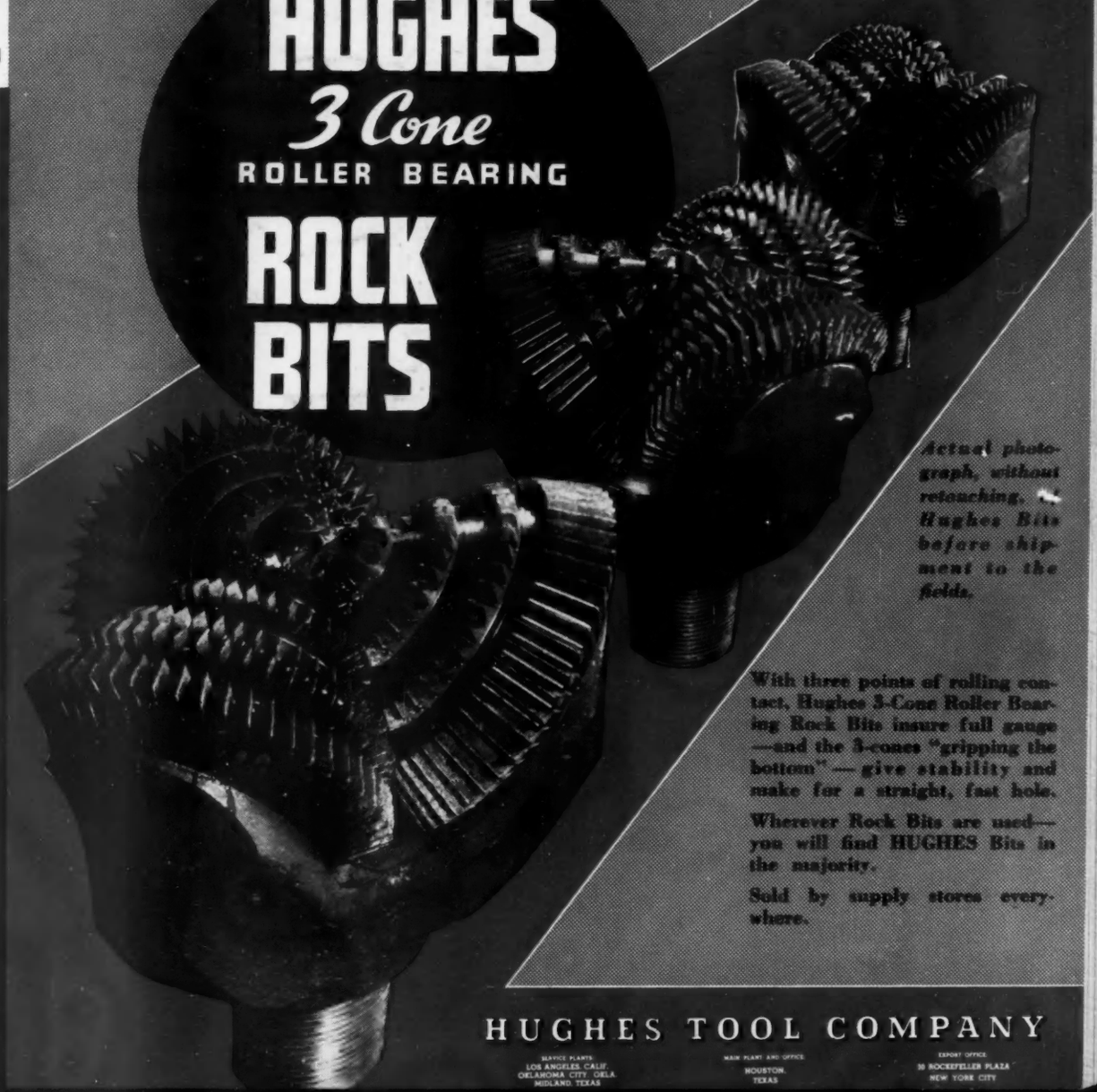

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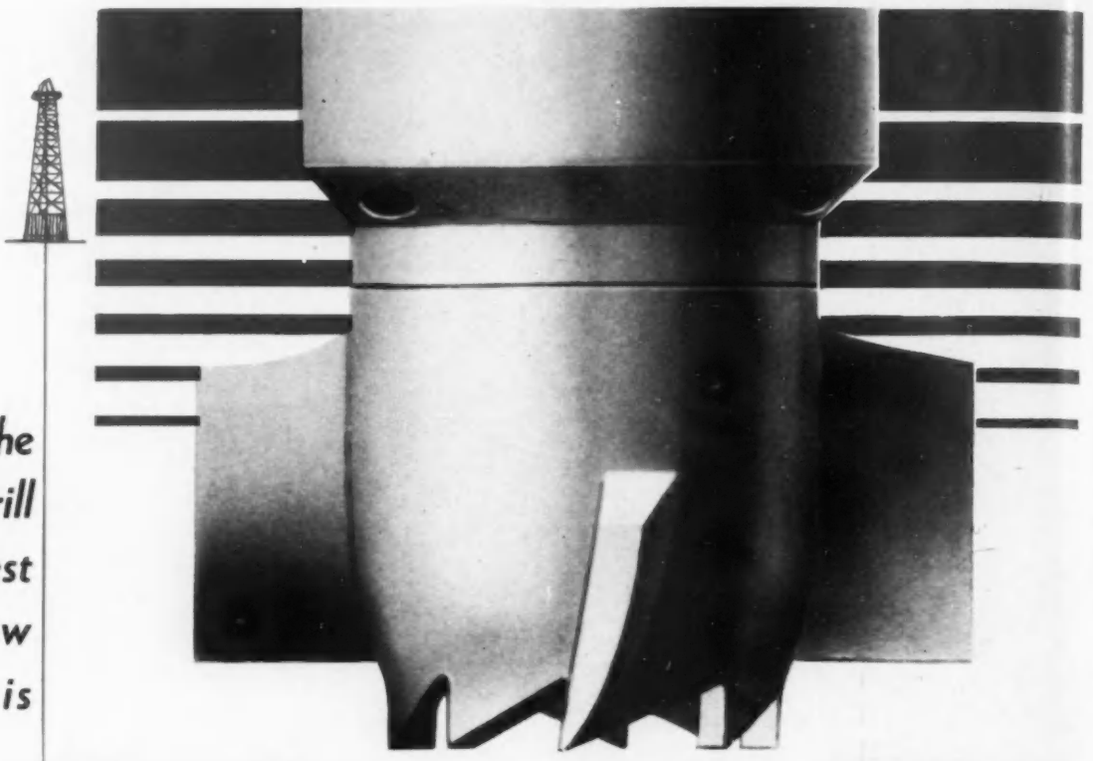

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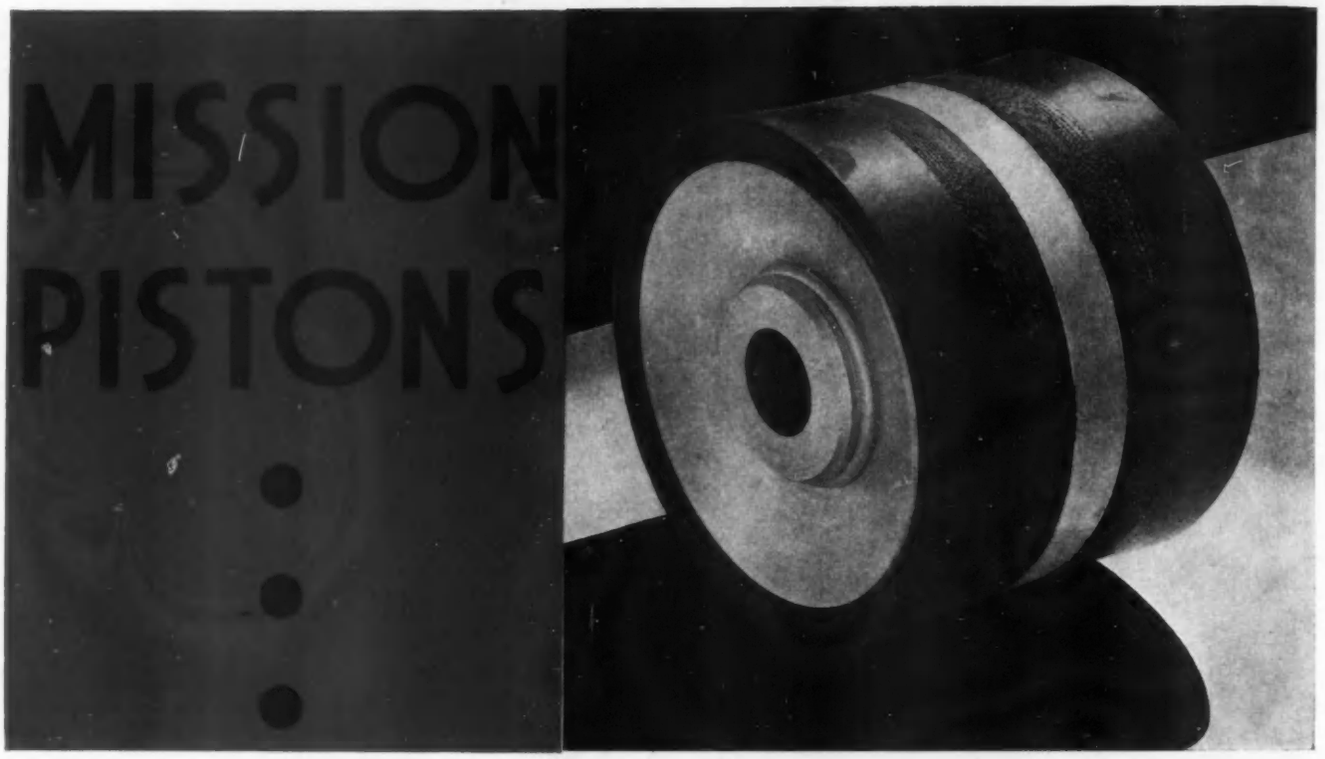

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VOLUME 76, No. 11

FEBRUARY 25, 1935

THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
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ENGINEERING • NEWS • STATISTICS

The Changing Panorama

At Washington

THE Connally bill was passed by the Congress conferees and has been sent to President Roosevelt. It was passed with but few amendments. Meanwhile, Representative Disney of Oklahoma has written a proposed federal control bill that is similar to the one he attempted to put into force last year. Page 11.

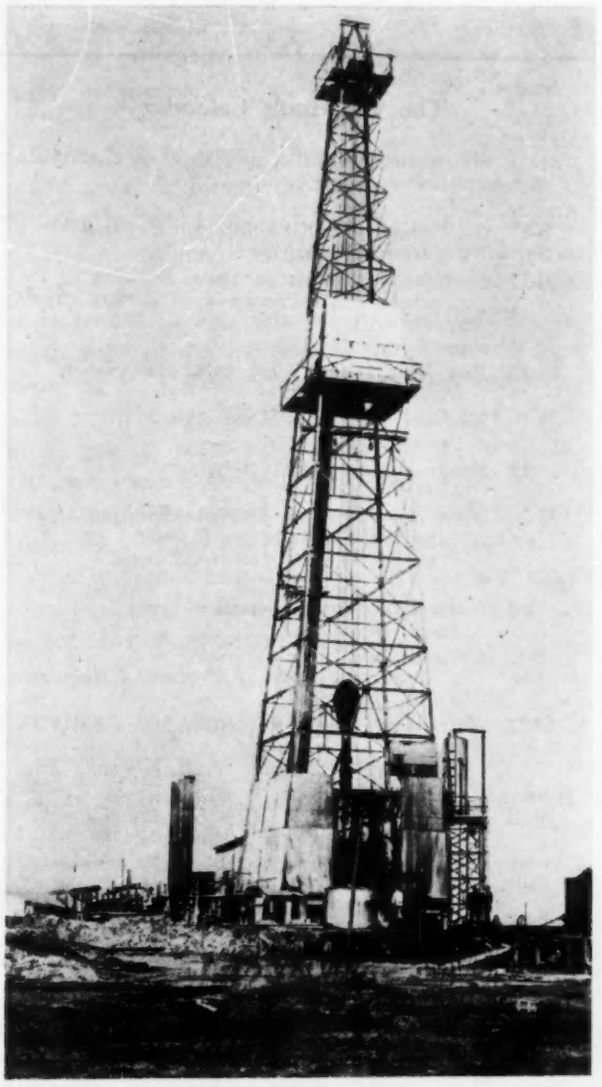
State Compacts

THE document drafted by representatives of state governors at Dallas last week virtually was dictated by Texas, and others had to accept, or else. However, while the compact drafted probably could be improved, the adopted one is undoubtedly legal and a step forward in the interstate compact move. Governor Allred of Texas urged the adoption of the compact to his legislature last week. Page 12.

Federal Control Postponed

AS long as the compact is awaiting action by the individual states there should not be much danger of Congress taking charge of the oil industry as per Harold L. Ickes wish. So regardless of the final outcome of the interstate compact idea the industry may have stalled off action at Washington. It is reasonable to assume that some of the states will not act this year, as some probably will not convene their legislatures for some time. It is interesting to note that Huey Long's domain refused to take part, or rather just ignored the meeting.

Shell Petroleum Corporation's Jarnigan 1, Roanoke field, Jefferson Davis Parish, Louisiana, which last week blew out at 10,001 feet. If a commercial producer it will be the deepest in the world and will influence future Gulf Coast operations materially. It is the second Gulf Coast test to exceed 10,000 feet in depth and the thirteenth in the world.



ANY KIND of permanent federal control of the oil industry has been made more remote by recent utterances of Mr. Ickes. He went to his own Bureau of Mines for pictures to illustrate his propaganda for federal regulation, and it is probable that he will regret that he did not also consult that department on facts. More than half of the members of the Congress come from oil producing states. They probably will hear from their constituents. Also the Congress itself has been making some investigations through a committee that did its work conscientiously. What congressmen from oil states know of conditions within their states and what the committee report will show, is so greatly at variance with Mr. Ickes' statements that all of them must be convinced that Mr. Ickes is deliberately misinformed or his zeal for his pet idea of governmental control has warped his honesty. He could have had correct information from competent men on his own payroll. It must be humiliating to the competent scientists, technologists and statisticians of the Bureau to have the head of the department so expose himself.

Congressmen already do not see a lot of things as Ickes sees them. The prospect that he would have enlarged powers under any form of federal control blocks the proposition on two counts: he is neither popular nor competent. The average congressman might overlook the latter, but not the former. The two together appear insurmountable.

The Oil Man's Calendar

MARCH
21-23 *American Association of Petroleum Geologists, Wichita, Kansas.*

APRIL
8-13 *Oil Equipment and Engineering Exposition, Houston, Texas.*
10-11 *American Petroleum Institute, Division of Production, Mid-Continent District, Spring Meeting, Amarillo, Texas.*
11-13 *Petroleum Industry Electrical Association, Dallas, Texas.*
18-19 *National Petroleum Association, Cleveland, Ohio.*
22 *American Chemical Society, New York.*
25-26 *American Petroleum Institute, Division of Production, Southwestern District, Plaza Hotel, San Antonio, Texas.*

MAY
1-3 *Natural Gasoline Association, Tulsa, Oklahoma.*
8-11 *Oil and Gas Power Division, American Society of Mechanical Engineers, Tulsa, Oklahoma.*
14-16 *American Petroleum Institute, Mid-Year Meeting, Mayo Hotel, Tulsa.*

JUNE
20-21 *Pennsylvania Grade Crude Oil Association, State College, Pennsylvania.*

SEPTEMBER
25-27 *National Petroleum Association, Atlantic City, New Jersey.*

NOVEMBER
4-5 *Independent Petroleum Association of America, Annual Meeting, Dallas, Texas.*
11-14 *American Petroleum Institute, Annual Meeting, Biltmore Hotel, Los Angeles.*

Gas Wasteage

GOVERNOR JAMES V. ALLRED has urged the Texas Legislature to pass legislation to curb gas waste. He would divorce gas pipe lines from integrated companies, use tail gas from stripping plants for repressuring, ratable taking by pipe line companies, and other restrictions. Page 14.

East Texas Activity

THE East Texas field continues to average 80 completions per week, and last week the number of producing wells passed the 16,000 mark which reduced the average well density to one well for each 7.21 acres. It is estimated that from 5000 to 7500 additional wells may be drilled in the 117,500-acre producing structure. This continued drilling activity is an important topic causing much discussion. Many think the field is being too closely drilled from an economic standpoint, although the per well density has not reached the per acreage average of other Woodbine sand fields. From an economic standpoint it undoubtedly is being too closely drilled, but the rush is on and apparently will not stop until production drops to a point that it no longer will be profitable. Page 29.

Completion Practices

OPERATORS in several West Texas fields have adopted completion practices that prevent contamination of the producing horizon. The method in reality is one of drilling in under control. The method has several advantages, therefore being of interest. Page 39.

Vocational Training

AN important trend within the industry is the growing popularity of vocational training classes. A number of plans have been put into successful operation. This was brought out at a recent meeting of the A. P. I. Topical Committee on Vocational Training. In Oklahoma, some 1000 petroleum workers attended about 35 vocational training classes during the fall term. In Texas, approximately 3000 oil employes attended 125 classes.

This type of work cannot help but bring valuable beneficial results to the oil companies and the employes.

Stabilization Is In Prospect

JACK LOGAN
Associate Editor

Congressional action taken toward providing federal aid in oil control. New legislation, designed to reinstate federal regulation of oil shipping, promises to stabilize the markets. Prices have been seriously depressed lately by increased hot oil output. Markets outside United States also are unstable.

NEW YORK CITY.

ENCOURAGING, at least temporarily, were the developments at Washington last week, bringing near realization a new federal oil control program. Control of the market-dominating East Texas field, largely by state authorities, gradually has been becoming less effective in recent weeks, hot oil output rising near 60,000 barrels daily. And the markets for refined oils throughout the United States have been unfavorably affected by the East Texas situation.

Pressure was consequently applied in Congress toward speeding federal oil control legislation that has been hanging fire, and the House and Senate conferees passed the measure on to President Roosevelt, who is expected to sign it momentarily.

The Measure Approved

THE measure as passed incorporates three outstanding features not included in the Connally bill. The net effect of the changes is to tone down the Senate measure, making federal control temporary rather than permanent, and less rigid, with the President exercising the power to dispense with the federal regulation in absence of overproduction.

The three provisions added in the passed measure embrace: (1) termination of the legislation June 1, 1937; (2) authority for the President to remove federal restrictions on oil shipping in event he finds the oil in commerce insufficient to balance supply with demand; and (3) authority for the federal government to confiscate oil put into interstate commerce in violation of state laws.

The primary purpose of the House measure as well as of the Connally bill is to reinstate federal oil shipping control. Such control, achieved through a federal tender board in East Texas, was operating with remarkable effectiveness until voided early in January by the Supreme Court decision in the Panama-Amazon cases. The shipping control prior to the decision was based on NIRA's Sub-Section 9 (c), which the court held unconstitutional.

Test Cases Likely

DESPITE much deliberation, aimed at making the new legislation air-tight, it is to be anticipated that East Texas complainants will early test the new control in the courts. The House measure as amended in the committee is questioned by some legal experts, for example, because of the provision that the President can lift the ban on hot oil, if he sees fit. The contention is that the NIRA section was invalidated because of a similar provision, involving improper delegation of legislative power to the executive.

Another argument almost certain to be advanced in any case against the contemplated federal control of oil shipments is one offered in the Panama-Amazon cases, but not considered by the Supreme Court in rendering its decision. It is that Congress either directly or through the President does not have the power to delegate to state authorities control over interstate commerce, which the latter would in effect have under contemplated legislation. By excluding from interstate commerce oil produced in excess of state allowables, the federal government would be surrendering to the states the power to determine how much oil could enter the national or interstate markets.

Prospect for Temporary Stability

ALTHOUGH it is apparent that the proposed new federal shipping control would run into legal difficulties, the eventual outcome of litigation would be in doubt for considerable time. (The Panama-Amazon cases required about a year for the final decision.) And if the lower courts lean toward upholding the new legislation, the federal shipping control will accomplish much toward stabilizing oil markets in months ahead, irrespective of final decisions in test cases.

Aside from the direct regulation which the federal tender board achieved under Section 9 (c), the board

also gave highly effective cooperation to state authorities in their control efforts in East Texas. Unquestionably, the state control in East Texas would be greatly strengthened by reinstatement of federal shipping control. Apart from the cooperation it would give, the federal tender board would be lessening the load on the Texas authorities, who have been endeavoring to regulate interstate as well as intra-state movements of oils.

Eastern Markets Weaker

AT the middle of the past week the instability of the retail markets was conspicuously evidenced when Socony-Vacuum Oil Company put into effect reductions of 1½ to two cents a gallon in its service station prices on gasoline in and adjacent to New York City. That was the second reduction within a few days, an earlier cut of one-half cent a gallon having been made. The half-cent reduction had been effective not only in New York City but also throughout nearly all the rest of the state and in New England. The new prices on regular grade were 14 cents in Brooklyn and 14½ cents in Manhattan. Tank prices were also reduced one-half cent, the new price on branded gasoline in New York harbor being six cents a gallon.

The weakening of the Eastern markets was regarded as reflecting recent steady weakening of the bulk prices of gasoline on the Gulf Coast. Such weakening, in turn, was ascribed to the persisting and increasing output of hot oil from East Texas.

World Oil Situation

THE depression of recent years has emphasized the fact industry and commerce are largely world-wide in scope, each nation faring in general like the others, and each industry reacting essentially the same in one country as in others. It is important, consequently, that the petroleum industry of the United States should keep an eye on what is happening in the rest of the world.

In that connection, some significant facts and figures have been assembled and interpreted by V. R. Garfias and R. V. Whetsel of the foreign department of Henry L. Doherty & Company, New York, in a paper on world petroleum consumption. The paper represented a contribution to the program for the annual meeting of the American Institute of Mining and Metallurgical Engineers at New York last week.

Overproduction in Past Five Years

FOR the world as a whole, petroleum production has exceeded demand every year for the past five years, 1930-1934, it is shown in the paper; the total excess for the period having aggregated 207,150,000 barrels. Such excess of nearly a quarter of a billion barrels of oil and oil products has been necessarily placed into storage, where it tends to make the world oil markets less stable.

It is true that oil storage in the United States has been reduced substantially in the past five years. But such reduction represented merely the transfer of stocks from the United States to other countries, with the United States steadily exporting more oil than it was importing. The excessive imports from the United States, together with excessive supplies from other countries, resulted in sharp increase of storage in the world outside the United States.

Markets Unstable Outside United States

A SIGNIFICANT conclusion that the authors draw in their paper is that the statistical position of the petroleum industry outside the United States has consequently become decidedly unstable. They believe, moreover, that the situation will likely become even more acute, in consequence of the recent opening of the pipe lines that are providing large market outlet for increased Iraq production.

That instability of the foreign situation is regarded as jeopardizing to some extent the present relatively favorable statistical position of the industry within the United States. The threat to the domestic situation is considered especially significant since the bright domestic picture has been due in part to a favorable trade balance, with exports consistently exceeding imports.

The Excess of World Production

IN the five year period considered, world production was placed by Messrs. Garfias and Whetsel at 7,292,398,000 barrels, including benzol, natural gasoline, as well as crude oil. Meanwhile, world consumption was 7,085,248,000 barrels, including fuel burned, refinery losses, and so forth, as well as refined products. The difference or excess of 207,150,000 barrels went to storage—mainly outside of the United States.

Figures are presented to show that, in effect, the United States was responsible, along with the rest of the world, for that excessive building up of world storage. For the five years, the supply in the United States is shown to have exceeded consumption by 111,401,000 barrels; while outside the United States the supply exceeded demand by 95,749,000 barrels.

THAT the United States was actually overproducing, despite steady reduction of storage, was explained by the fact exports were consistently greater than imports. So while a favorable situation was being maintained in the domestic oil picture, it was being achieved at the expense of the world markets, onto which the United States was releasing more oil than it was absorbing. While the United States oil storage was coming down, that of the rest of the world, and even of the world as a whole, was steadily increasing. The United States reduced its stocks in the five years by about 136,595,000 barrels. But the rest of the world in the meantime added 343,745,000 barrels to storage, the greatest accumulation occurring in 1934, when there was an increase of 105,189,000 barrels.

Shipment Control Bill Passed

Few Amendments Made; But New Federal Control Bill Attempt Appears Probable

WASHINGTON, D. C., FEBRUARY 22.

EXTENDING the life of the measure until June 16, 1937, so as to have it expire coincidentally with the new Industrial Recovery Act shortly to be enacted, the conferees on the contraband oil bill today reached an agreement, secured adoption of their report by the Senate and House of Representatives and sent the bill to the White House for the approval of President Roosevelt.

Aside from giving the bill, which was written by the House Committee on Interstate and Foreign Commerce would have expired June 1, 1936, a longer life, the only important change in the measure was the insertion of a clause that if the provision authorizing the President to lift the embargo on the interstate transportation in the even of an oil shortage was declared unconstitutional by the courts such a finding should not affect any other provision of the act.

Reporting to the Senate for the conferees, Senator Connally of Texas, author of the original measure, explained that in its substitute for the Senate bill the House had qualified the absolute prohibition of the interstate shipment of oil which he had written by tying in a proviso to the effect that whenever the President determined that supply and demand were out of balance he might lift the prohibition.

"The conferees," he said, "agreed to put the absolute prohibition in one section and put a qualifying phrase in another section, as follows: 'If any provision of this section or the application thereof shall be held to be invalid the validity or application of Section 3 shall not be affected thereby.'

"The purpose of doing that," he continued, "was that the Senate conferees were fearful that if we should adopt the language of the House bill we should be just where we were before that the Supreme Court would hold the whole measure unconstitutional because it was dependent upon the President's finding certain facts to exist."

On motion of Representative Martin Dies of Texas, the House struck out the provision that would have made the bill inapplicable in the case of oil products moving in interstate commerce on or before the fifth day after enactment.

Adoption of this amendment was seen due largely to receipt by the House membership of a telegram from W. F. Weeks, Tyler, Texas, warning that there are approximately 4,500,000 barrels of hot oil in storage which would probably be moved into interstate commerce during the five-day period originally contemplated before the new law became effective.

During the consideration of the bill the House rejected two amendments proposed by Representative Sauthoff of Wisconsin, one of which would have declared oil a public utility and the other to increase the fine for violations of the act from $2000 to $5000.

The fight for adoption of the rule for immediate consideration of the bill was led by Representative Dies. There was no opposition, either to the rule or to the measure itself.

Explaining the situation leading up to the writing of the measure and defending its constitutionality, Congressman Dies told the House that "after reading the principal cases on the subject, while I believe Congress has the constitutional authority, in order to accomplish an economic and social end, to cooperate with the states in a conservation policy, I also wish to state that there is no definite decision no definite commitment on the part of the Supreme Court that would authorize us to say beyond any question that this law is constitutional. Of course, the courts have held, upon a number of occasions, that Congress has the right to exclude commodities from interstate commerce or that the right to regulate, under the Constitution, must necessarily include the right to exclude under certain circumstances.

"If we do not have the constitutional authority to provide reasonable conservation through this act, we certainly have the authority to purchase these priceless resources; and so far as I am concerned, I am almost prepared to vote for a measure which will authorize the federal government to purchase sufficient quantities of oil reserves to protect our children, and our children's children against the waste and exhaustion of this priceless resource; and, further than that, to insure adequate oil reserves so that in times to come, when we shall have wasted our oil supply by using 70 percent when we have only 20 percent as compared with the rest of the world—that before that time comes we will buy, and set aside ample and adequate oil reserves to protect our Navy, our Army and our aircraft in time of war."

Questioned by Representative Robison of Kentucky as to what percentage of the industry is opposed to the legislation, Dies declared he was "not interested" in what the oil industry thinks about it. "I am thinking of what is for the best interests of the country. I believe that the majority of the oil industry is in favor of this bill, and that they desire to obey the sound laws of conservation. We cannot judge the entire oil industry by the racketeers and violators that form a minority."

Discussion of the bill itself brought out a difference of opinion as to the efficiency of enforcement of the Texas laws, Representative Dies declaring that the state authorities were restricting intrastate transportation, while Congressman Cole of Maryland, who headed the investigating committee which visited the state last summer, denied this to be a fact and asserted that "the state of Texas cannot do it without almost prohibitive expense and interminable litigation."

Attacking "hogs and oil thieves" whom he declared were responsible for present conditions in the industry and charging the members of the interstate and foreign commerce committee in charge of the bill with "pussyfooting," Representative

Text of Proposed Federal Oil Control Bill Appears on Page 46

Sauthoff characterized the bill as a "feeble, futile gesture thrown out for the benefit of the public, to make it believe it is going to get something" and demanded that the House enact "a real conservation bill" which would classify oil as a public utility.

"Make the production and distribution of oil a public utility and then we can have some real, some effective regulation," he declared. "Make the penalty for its violation so severe that the oil hog and the oil thief who gets caught will find that there are no dividends in this unholy traffic.

"I am told that there are 4,000,000 barrels of hot oil today in Texas waiting for a chance to be sold. You say Texas has a law against it. Then why is nothing done? Why is no one arrested? Why are there no prosecutions? It is utterly impossible to run off such a huge amount of oil in excess of the quota without the knowledge and acquiescence of the officials. Running oil at night, tapping pipes underground, trick valves, and a dozen other methods are employed to circumvent the law. Visitors have seen it and newspaper men have written articles on the subject, yet the officials of Texas are deaf, dumb and blind.

"There can be only one conclusion from such dereliction of public duty. There is official conspiracy and connivance at the evasion of the law. And this law does nothing to alter the present indefensible situation. That is why I wanted a better law—a law that will prevent bringing oil to the surface in excess of the quota."

Federal Control Bill

Legislation giving to the government full control over the industry, with power to regulate production to meet demand, was urged by Representative Disney of Oklahoma, who revealed that he will introduce a bill to that effect in the near future.

Drafted along the lines of the Thomas-Disney bill which failed of enactment last session, this measure, Disney said, has been submitted to the President and referred to the attorney general for an opinion on its constitutionality.

"I am not proposing federal control," he explained. "I am proposing a degree of cooperation between the federal government and the oil-producing states which I believe is vitally necessary both for the recovery of this important industry, for the continuation and improvement of the purchasing power of the people of those states, for the protection of over much more than a million employes engaged in this industry and, possibly most significant of all, for the protection of each individual oil state from any possible invasion of its rights by any group in some other state.

"The bill provides for the scientific determination of the amount of production required to meet our demand for consumption and export. The federal government, under this bill, will have no authority to affect the movement of petroleum or its products from any state or to propose production quotas within that state unless a state endeavors to obtain for itself more than its proper and equitable share of the national market. An interstate compact is provided for in this bill, and while such compact proves effective the federal government will merely furnish to the states in such a compact the scientific estimate of the production to which such states are properly entitled, and will have no other authority unless these states attempt production beyond their just share, or withdraw from such compact, and sets up a basis to protect such states during the adoption of a practical compact."

Although advisers to Oil Administrator Harold L. Ickes believe the revised measure to be better than the Senate bill, that official still is committed to federal control, it was indicated February 19.

Arguments for federal control, Ickes said, have been strengthened by the nine-state compact adopted at Dallas last week.

Adopted Interstate Compact Published On Page 56

Allred Urges Adoption Of Interstate Compacts

Austin, Texas.—In a message delivered personally before the Texas Legislature last week, Governor James V. Allred urged that Texas be the first to sign the interstate oil compact prepared at Dallas the week before.

"Since legislation is pending and proposed before congress," he said, "dealing with the oil industry and the natural resources of the oil-producing states, which pending and proposed national legislation will naturally be influenced to some extent by the action of the states, I respectfully urge that this compact be approved by the legislature at the earliest opportunity.

"It is apparent from the provisions of said compact that it will be of great benefit in the conservation of petroleum and natural gas and the prevention of physical waste of these natural resources.

"I direct your attention to the fact," said the governor, "that in keeping with the provisions of House Concurrent Resolution No. 26, said compact is designed to prevent the waste of our natural resources without price-fixing, the creation of perpetuation of monopoly, or regimentation."

Roosevelt Favors Government Oil Control

Washington, D. C.—Extension of the National Industrial Recovery Act for a period of two years was urged upon Congress February 20 by President Roosevelt.

In his message, the President is seen strongly to favor government control of natural resources, such as oil, gas and coal, a view he is understood frequently to have expressed in the past, in connection with which he is said to have discussed with a number of visitors the idea of declaring oil a public utility.

Declaring in his message that the fundamental principles of the anti-trust laws should be more adequately applied and that monopolies and price fixing within the industries must not be allowed or condoned, the President added:

"But I submit that in the case of certain natural resources such as coal, oil and gas, the people of the United States need government supervision over these resources devised for the purpose of eliminating their waste and of controlling their output and stabilizing employment in them, to the end that the public will be protected and that ruinous price cutting and inordinate profits will both be denied."

Among members of Congress this view was taken as an expression of the chief executive's advocacy of supervision of the oil industry, something which has consistently been sought by Oil Administrator Harold L. Ickes.

However, it is believed, the President is not willing to go so far at this time as to ask that oil be made a public utility. Some of those who have discussed this matter with him have suggested that the time is not opportune for such action, and the President has been inclined to agree.

So far as oil legislation is concerned, it is understood at the Capitol that passage of the Connally bill will be as far as the present session of Congress will go. There is a rather general belief that if the interstate movement of contraband oil can be stopped the states will be able to enforce their proration laws and it is felt that time should be given to demonstrate whether this can be done.

In his message to Congress, President Roosevelt outlined basic principles for the new law, including the tightening up of the policy and standards for administration and providing a better means of enforcement than the imposition of jail sentences.

New Mexico became the first state to adopt the interstate oil compact plan drafted at Dallas last week. The New Mexico legislature ratified the plan late this week.

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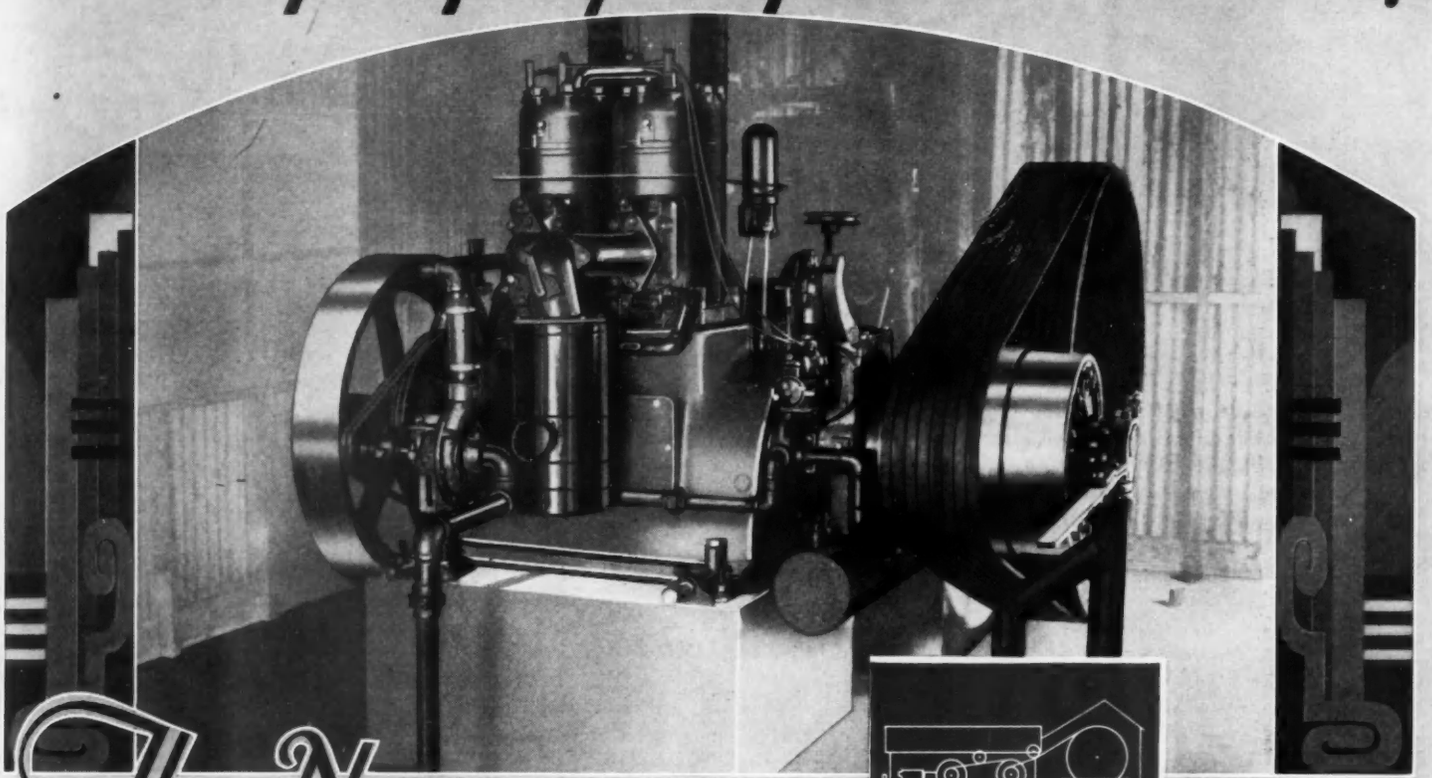

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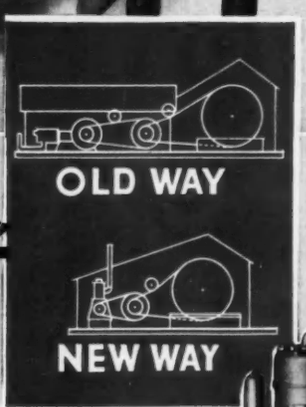

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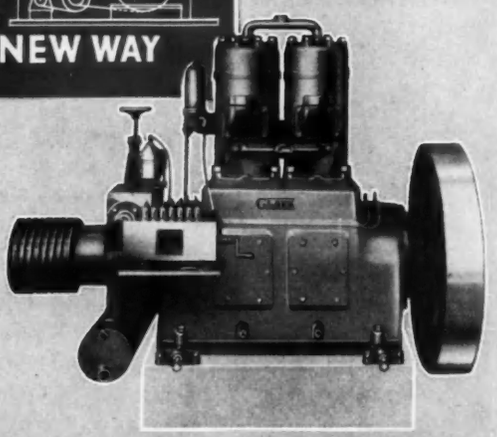

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Commission Empowered To Control Oil Movement

Austin, Texas.—The Third Court of Civil Appeals last week handed down decisions in five cases involving tenders on processed crude oil in storage on December 10, when the first order requiring tenders on oil other than crude was promulgated by the Texas railroad commission.

The court held that products derived from illegally produced crude were contraband if on December 10 they were in the hands of the processor who received the crude.

However, if the products were in the hands of purchasers who had not received the crude, these purchasers held legal oil. The court ruled that this oil could be moved after the holder had filed inventories required by railroad commission orders and had obtained a tender from the commission.

The decision of the court did not cover any products purchased after December 10, the day the order became effective, and none of the decisions referred to the disposition of such products after December 25, when Senate Bill 21 became effective. This law gave the railroad commission specific power to control the movement of refined products, require reports and tenders, and make other reports of this nature a prerequisite to the movement of products.

The court pointed out that under the provisions of House Bill 99, previously held valid, the commission could require refiners to keep records of the source of their crude and the disposition of the products, so long as these products remained "in the hands of the original transformer thereof."

Since the decisions of the court were handed down, no suits to move untendered crude have been filed by any refiner.

The suits decided were: Tyler Texas Oil and Refining Company; G. H. Burnham; C. D. Archer; Primrose Petroleum Co.; Linzie Refining Co.; J. M. Bradshaw.

Senate Plans Oil Code Investigation

Washington, D. C.—Senatorial investigation of the oil code this week appeared likely as a result of the decision of a sub-committee of the Senate judiciary committee, headed by Senator King of Utah, and including Senators Borah of Idaho and McGill of Kansas, to make a thorough study of the negotiation and adoption of codes and the activities thereunder of officials of the National Recovery Administration and the code authorities.

Indications that oil would be among the commodities investigated were developed when the sub-committee conferred with Lowell Mason, who served as counsel for the Darrow board, and who is expected to serve the sub-committee in a similar capacity if the Senate provides funds asked for the probe.

Senator King has requested the Department of Commerce,, Justice Department and Federal Trade Commission to submit such material as they may have on the subject of codes, and will study the reports of the Darrow board on the oil and other codes which it investigated.

Although Senators Nye of North Dakota and McCarran of Nevada last week sought Senate authority for an investigation of the NRA, the referring of their measure to the finance committee, headed by Senator Harrison of Mississippi, a strong supporter of the Administration, is believed to have kelled all chance of their securing such an inquiry. The judiciary sub-committee, however, can, and according to Senator King, will make its investigation regardless of whether the Senate furnishes a special gund.

Passage of Legislation *Is Urged By Allred to* Stop Gas Wasteage

Austin, Texas.—In a message delivered personally to a joint session of the Texas Legislature last Thursday, Governor James V. Allred urged the passage of legislation to curb gas waste. Divorcement of gas pine lines from integrated companies and repressuring of tail gas from stripping plants were advocated as two of the methods that would aid in waste reduction.

Excerpts from the message are set out below:

"It is my conception that natural gas stripping for the purpose of extracting natural gasoline, as such, is both a worthy and profitable industry. The waste of which I speak occurs principally after this operation. The return of dry or stripped gas to the producing strata of the gas or oil field in a manner to save or use it beneficially is a worthy operation; as also is the use of this stripped gas for other beneficial purposes such as light, fuel or manufacture. But blowing of this product into the open air—as also is the blowing of any natural gas into the open air beyond practical limitations required incident to the production of oil, is intolerable under sound conservation policy.

"A sound public policy demands that this atrocious waste be stopped and that our gas resources be conserved for useful purposes for the present and future generations.

"I respectfully recommend the passage of appropriate legislation to correct these evils and, at the same time, to insure the producers and land owners their ratable share of gas withdrawals from the fields. I particularly recommend the following:

"First: Enactment of legislation to effectuate gas conservation and the elimi-

(*Continued on page 52*)

Questions Where are the prolific oil fields of the world outside of the U. S. A.? What have they produced? What are their chances for further increasing their production? What is the extent of their proved areas? How many sands? What companies operate in these fields? Is foreign activity up or down—and where? What are the prospects of new fields? Are there countries now not producing that have marked possibilities of entering the producing columns? What countries? Where are the evidences of possible petroleum deposits strong among foreign countries?

Answers These are some of the questions that will be answered in the Foreign Edition of The OIL WEEKLY to be published March 18.

There never has been a foreign issue of any oil publication undertaken on the scale of this forthcoming Foreign Issue of The OIL WEEKLY.

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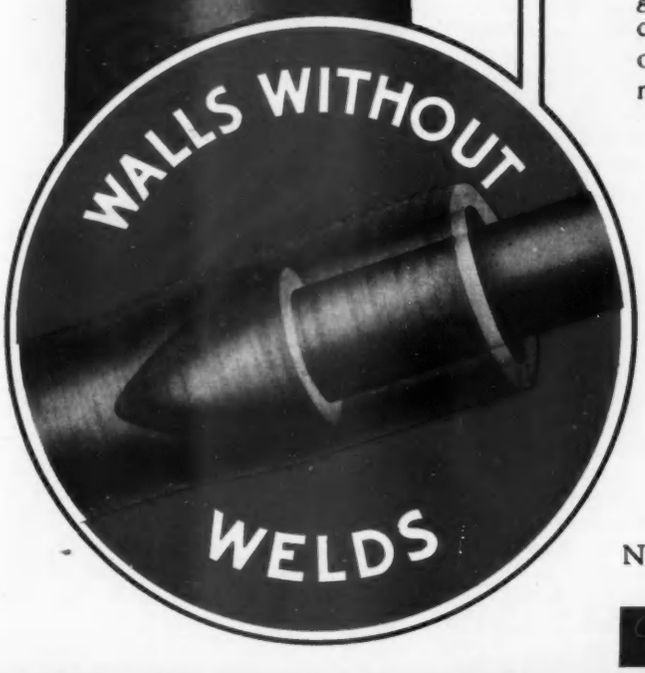

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MEN IN THE INDUSTRY'S NEWS

R. W. McILVAIN, JR., assistant manager of the Pure Oil Company at Houston, visited the company's holdings in southwest Louisiana during the past week.

W. H. REBER, who has been head of the industrial relations department of the Baytown refinery of Humble Oil & Refining Company, has been appointed assistant chief engineer of the plant. He will have charge of mechanics and construction at the plant.

EVERETTE DeGOLYER was reelected chairman of the geophysical committee of the American Institute of Mining and Metallurgical Engineers at its annual meeting last week in New York. Sherwin F. Kelly and Frederick W. Lee were reelected vice chairman and secretary, respectively.

E. W. K. ANDRAU has announced the opening of a consulting office at 221 Shell Building, Houston. He will specialize in electric logging interpretations, oil field subsurface and exploitation problems, including valuations and appraisals. Mr. Andrau formerly was chief subsurface engineer with Shell Petroleum Corporation, Houston, and previously was engaged as field geologist in the salt dome areas of Iraq, Persia, Roumania and Germany.

CHARLES MALL, Michigan manager-superintendent of Stanolind Oil & Gas Company with offices in Muskegon, Mich., has been transferred to Texas.

A. F. MAGALE, geologist for Arkansas Gas & Fuel Company, Lake Charles, has moved to Baton Rouge. Two scouts will be added to the company to work out of Baton Rouge.

R. G. STACEY, formerly maintenance foreman for Pure Oil Company at Sweet Lake, Louisiana Gulf Coast, has been promoted to production foreman of the Sweet Lake district.

LESTER A. LUECKE, formerly chief geologist for Colombian Petroleum Company, a Colombian subsidiary of Gulf Oil Corporation, recently has been added to the geological staff of Gulf Oil Corporation in Pittsburgh.

FRED DUMROESE, formerly head of the land department in the Kansas district for Sinclair Prairie Oil Company, has been made head of the land department in the Gulf Coast district with headquarters in Houston. He succeeds R. O. Lowrance, resigned.

MR. AND MRS. GEO. O. SUMAN, Los Angeles, celebrated their golden wedding anniversary on February 13 surrounded by thirty-five relatives including sons, daughters and other members of the family. John R. Suman, vice president of Humble Oil & Refining Company, a son, flew to Los Angeles from Houston. Geo. O. Suman, another son, was present from Bakersfield, as was Court W. Suman of Encino. The two daughters present were Mrs. G. F. Sparling of Inglewood and Mrs. F. H. Waring of Beverly Hills. The father was the first Suman of the family to drill a well, having drilled a shallow well for gas, for the home at Daleville, Indiana, many years ago. The family moved from Indiana to Los Angeles in 1907.

J. S. HUDNALL of Hudnall & Pirtle, consulting engineers, Tyler, Texas, addressed the Houston Geological Society at its regular weekly meeting February 21. Mr. Hudnall discussed "Compressibility of the East Texas Reservoir Rocks and Its Relations to the Production of Oil."

CHARLES E. MANGOLD, divisional manager in Louisiana and Arkansas for Dowell, Incorporated, with headquarters in Shreveport has been transferred to the company's office at Wichita, Kansas. He has ben in charge of the Shreveport office since July last year. The Shreveport office is temporarily in charge of Mrs. Claire Bishop and field work is in charge of Charles A. Prince.

DURWARD N. JOLLY, consulting geologist of Shreveport, Louisiana, has been in San Antonio, Texas, recently on a business trip.

R. O. (ARCH) LOWRANCE, who has been manager of the land department in the Gulf Coast for Sinclair Prairie Oil Company, has resigned to become associated with Shasta Oil Company.

MORTON T. HIGGS, representing Sperry-Sun Well Surveying Company of Philadelphia, Pa., in Oklahoma, Kansas and Arkansas, has established offices at 425 Petroleum Building, Tulsa. Higgs was formerly located in Houston and at one time was a geologist working in Oklahoma areas. He is well known to many of the pioneer geologists of the state.

C. L. WAGNER, consulting geologist and independent operator of Oklahoma City, sailed on Wednesday, February 20, along with a group of Oklahoma City friends for Havana, Cuba.

JACK BENSON, Republic Supply Company, Houston, woke many of his friends early February 18 to inform them he was the father of a baby boy. Mrs. Benson and the son, Jack Lundy Benson, are doing fine.

W. B. ROYER, land man for Tide Water Oil Company, Houston, left during the past week on a business trip through the West Texas district.

MARSHALL JOY, resident manager of Empire Oil & Gas Company's Michigan division for the past year, has been returned to the Oklahoma offices. Michigan offices are located in Mt. Pleasant and Ray Hunt, geologist and land man will be in charge.

S. JOHN SMITH, general manager of Miller Sand Pump Company of Sapulpa, Oklahoma, is visiting in the fields of Texas.

H. K. BROWNING, sales manager for S. M. Jones Company, has announced the removal of sales headquarters from Toledo, Ohio, to 1015 McBirney Building, Tulsa, Oklahoma. A. L. Meeks, formerly Tulsa district representative for the company, is now sales representative in charge of the Panhandle district and D. O. Johnson, formerly with A. M. Byers Company, is sales representative in the Tulsa district.

MR. and MRS EDWIN M. JONES, of San Antonio, are spending a vacation in Miami, Florida. Jones is one of the most active operators in South Texas, and is now carrying on a drilling campaign in the new West Tuleta field, Bee County.

EUGENE W. HOUGH, vice president and director of sales for Naylor Pipe Company, Chicago, and L. S. (Spider) Allen, Mid-Continent representative of the company, Tulsa, were recent Houston business visitors.

J. ELMER THOMAS is head of the newly formed Gates Ranch Oil Company. The company will maintain offices in the Milam Building, San Antonio. Also in the concern are Clever Fields and Paul D. Crawford. Thomas drilled one test on the Gates ranch in Webb County and has plans for further development work.

GEORGE A. DONNALLY, with Eastland Oil Company, Fort Worth, spent several days in San Antonio. This concern is drilling an Ordovician test to about 6,000 feet in Kerr County.

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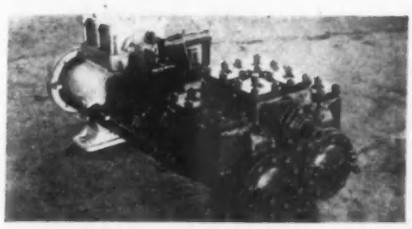
At Houston: Complete used Rotary in excellent condition and priced right. Latest type heavy duty equipment throughout. Also complete rotary now being overhauled at Wichita. Will be ready for delivery soon.



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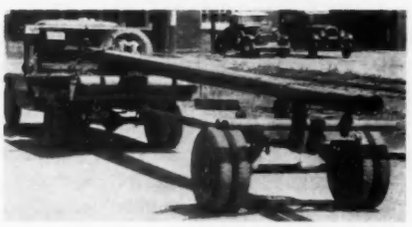

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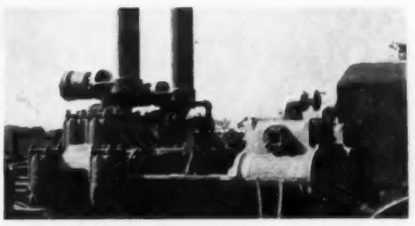

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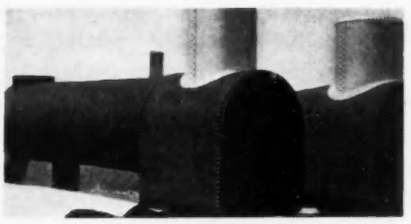

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A. I. M. E. Oil Members

Conservative, Orderly Field Development Plans Stressed

JACK LOGAN
Associate Editor

NEW YORK.

REPRESENTATIVES of the petroleum industry manifested particular concern over conserving and efficiently developing the nation's oil reserves when they met in New York February 18-21 at the annual meeting of the American Institute of Mining and Metallurgical Engineers.

The subjects of conservation and of orderly and efficient development of oil fields were conspicuous in papers and discussions that constituted the four-day program of the petroleum division of the Institute.

A half-day was left open on the petroleum division's program so that members could hear the address of Dr. Charles K. Leith, director of the Institute and member of President Roosevelt's Planning Committee, on "A Mineral Policy for the United States." And at divisional sessions of the petroleum division there were, among others, a paper by Earl Oliver, chairman of the division's stabilization committee, and appraisal engineer of Ponca City, Oklahoma, on "Modifying the Capture Law," and one by Joseph E. Pogue, consulting engineer, New York, on "Collective Planning in the Petroleum Industry."

In his address Dr. Leith urged a permanent mineral policy for the federal government, and outlined the mineral policy that is taking form in the national capital. Dr. Leith is a professor of geology at the University of Wisconsin, at Madison, and is vice chairman of the Planning Committee for a Mineral Policy appointed in July of last year by President Roosevelt. That committee, of which Secretary-Oil Administrator Ickes is chairman, also acts as the Mineral Section of the National Resources Board. Through that board, it recently submitted to the President a preliminary outline of a plan. The plan has been transmitted by the President, in turn, to Congress, with the statement it constitutes "a foundation for what we hope will be a permanent policy of orderly development in every part of the United States."

In his address, Dr. Leith discussed the recommendations that were made by the Planning Committee, pointing out that the keynote of planning for minerals is their exhaustibility and their irregularity of distribution among states and nations. Those conditions, he said, were responsible for the problems of conservation and national defense. Minerals are grouped by the committee as "surplus" and "deficit" minerals, with oil falling within the first category, along with coal, copper, lead, and zinc. With the aim of making proper readjustments for the days of increasing costs, that will come, the committee points out that economic and social conditions—not so much technological practices—need to be revised. There is need, for instance, for dealing with unrestricted competition, which has caused over-development, waste, and bad employment conditions. Cooperative control as under NIRA, with curbs on monopoly, should be permitted by the government, it was recommended in connection with the "surplus" mineral industries.

Sub-marginal mineral deposits should be given especial attention, it is recommended. Taxation recommendations included one that the nation and states not make ad valorem taxes, repeated year after year, so high as to force companies into premature development, that might contribute to temporary overproduction.

For the "surplus" minerals, the committee recommends there should be government encouragement to negotiations for foreign markets, and to American participation in cartels. Modification of anti-trust laws to permit cooperative combating of overproduction is also implied. Encouragement of American enterprise in foreign fields is also desirable, in the opinion of the committee, especially as regards the "deficit" minerals.

Dr. Leith stressed the fact that the minerals planning committee's report was only preliminary, and that only a beginning has so far been made toward achievement of the objectives outlined.

Mr. Oliver's paper on modifying the law of capture was essentially one on unitization. In it the author outlined the legal conditions necessary to promote unit operation, and suggested unitization procedure that can be followed when those legal conditions are established. For adoption of unit operation more generally, two legal concepts must be made integral parts of oil and gas law, he declared, namely: (1) a practical substitute for the capture rule, which is entirely feasible, and (2) cooperative ownership control for the individual oil and gas pool.

With those concepts incorporated into law, the steps involved in unitization are simplified to: (1) selection of areas to be unitized, (2) exploration procedure, and (3) exploitation procedure. It is indicated that new fields and wildcat areas would offer the primary places for inauguration of unit operation. Both exploration and exploitation would involve cooperative action among concerns involved, as in unitization plans that have been actually inaugurated.

Voluntary unitization under the capture law is characterized as mainly an idealistic theory that is extremely difficult to apply, and it is urged that engineers and oil companies endeavor to induce legislative bodies to amend the oil and gas laws to embody the mentioned two concepts. The voluntary unitization plans that have been tried have given proof of practicability and desirability of the idea, and could be used as argument to convince the legislators, it was pointed out.

In his paper Mr. Pogue pointed out that collective planning in the petroleum industry has been in a process of evolution since the World War, passing through four distinct phases. First was the "War Plan," under which control for national defense through conservation was paramount. After the war was the Inventory Plan, involving inventory accumulation for stabilization. Third was the Proration Plan, limiting supply to demand. Finally, came the Code Plan, involving industrial codification of oil under NIRA.

At present the industry is operating under the latter two plans, it was explained, with progressive changes still under way. Whither the evolution will lead cannot yet be clearly perceived, Mr. Pogue asserted, but it will apparently lead roughly to one or the other of these destinations: (1) a fully centralized plan, under federal authority, tending to restrict competition, regulate volume and prices, and limit growth and change; (2) a decentralized plan combining proration with

Study Future Operations

relative freedom of prices and preservation of competition; or (3) a reversion to competitive planning, involving the aggregate of plans of competing units.

Aside from the address by Dr. Leith, the A.I.M.E. meeting embraced a special program for the petroleum division of the institute, extending over the three days, Tuesday, Wednesday, and Thursday. In the meantime there occurred also other meetings which were of interest to special elements within the petroleum industry, one group of papers dealing with geophysics and petroleum geology, and another with the use of metals in the petroleum industry. While the geophysical papers extended through the Tuesday and Wednesday sessions, the first of them were on the program of the opening day of the meeting, Monday.

Petroleum Engineering

The petroleum division program proper embodied, as usual, papers on engineering, production statistics and developments in domestic and foreign fields, and petroleum economics.

This divisional program got under way Tuesday morning, when there were scheduled three papers on production engineering subjects and another of interest to production engineers. Presiding at the presentation of the production engineering papers was H. F. Power, Gypsy Oil Company, Tulsa, chairman. The three production engineering papers were as follows: 1. "Influence of Well Diameter Upon the Pressure Gradient and Rate of Flow of Oil Through the Reservoir Rock in the Vicinity of a High-Pressure Flowing Well," by L. C. Uren, J. Domercq, Jr., and J. Mejia; 2. "Fundamentals of Casing-Joint Design and Field Application," by J. B. Graham and E. E. Smith; and 3. "A New Type Dynamometer for the Study of Pumping Problems," by Emory Kemler. The paper of interest to petroleum production engineers as well as to others within the industry was that of Earl Oliver on "Modifying the Capture Law."

The petroleum division program was left open Tuesday afternoon so as to permit hearing of Dr. Leith's address on "A Mineral Policy for the United States."

United States Fields

Wednesday was given over on the petroleum division program to the usual symposium on petroleum production. Papers on domestic fields were taken up in the morning session, and those on foreign countries and fields in the after-

(*Continued on page 24*)

Industry Is Deeply Involved In Collective Planning Trend*

JOSEPH E. POGUE
Consulting Engineer, New York

THE petroleum industry has been involved in more collective planning than any other American industry, with the exception of the railroads and utilities, and is therefore of interest as a case study in the experimental attempts to regulate the economic consequences of free competition. Planning is, of course, an integral part of effective management and hence at the outset a distinction must be clearly drawn between competitive planning and collective planning. By competitive planning is meant the aggregate of plans drawn up and prosecuted by the competing units occupying a field of enterprise; by collective planning is meant a collusion of plans, either originating amongst some or all competitors, or else imposed upon them, whether accepted or resisted, by some superior authority, usually the state. The prevailing popular concept of "planning" as applied to industry appears to be a program of conduct superimposed upon an industry unwilling or incapable of achieving a socially and economically desirable result under free competition. In this brief and tentative analysis of the subject, competitive planning is left to one side and attention is focused upon the matter of collective planning as defined above. A basic functional difference between the two categories of planning is that in the case of competitive planning the individual plans are small, numerous, and tend to offset one another when in error; whereas in the case of collective planning, the separate plans are larger in scope, fewer in number, and tend to escape the incidence of the principle of compensation.

In viewing the evolution of collective planning in the petroleum industry we find that during the past 20 years there have developed four more or less well-defined collective plans and that at the present time the industry is deeply involved in a collective planning trend pointing toward further varieties. The four plans, which are to some degree transitional, may be conveniently named from the chief incident that led to their respective formulations. The first collective plan was the program of control developed during the World War and hence called the War Plan. The second plan was one originating within the industry in the period between the war and the inflation of the late twenties and called the Inventory Plan because it involved the theory of stabilization by means of inventory accumulation. The third plan paralleled the rise of the late credit inflation and its resulting deflation and is termed the Proration Plan because it involved a regulation of crude oil supply through a pro rata distribution of existing demand to the various sources of supply. The fourth plan was inaugurated with the passage of the National Industrial Recovery Act and is called the Code Plan because it was developed under a system of industrial codification and operated under the petroleum code. These four collective plans will be examined in turn to see if their specific application affords any basis for drawing economic deductions or generalizations bearing upon the practical application of collective planning in general.

The War Plan

The importance of the petroleum industry in the conduct of the World War led to the development of a program of emergency control upon the establishment of the Oil Division of the United States Fuel Administration on January 10, 1918. Acting under the authority of the Food and Fuel Control Act of August 10, 1917, the Oil Division was delegated with broad powers of regulation which were never called fully into action, owing to the successful development of a policy of cooperation between the oil industry and the Fuel Administration whereby the oil

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industry, acting through the National Petroleum War Service Committee, became a self-governing body cooperating with the objectives of the administration. [1]The Oil Division brought the oil industry into a plan to "Stabilize prices and maintain uninterrupted flow of crude," which included voluntary agreements restricting prices for refined products.

"The Plan," as the agreement came to be called, was approved in final form on August 9, 1918, and operated until its dissolution on December 12, 1918.

The objectives of the war control were to stimulate and coordinate supply, in the face of an augmented demand, and to prevent an undue rise in prices. There was no problem presented as to restricting supply, except in so far as some diversion of supply from less essential to more essential uses was brought about. The industry effectively cooperated to these ends; all essential requirements were met; and "the acceleration in crude prices was stopped, and a tempering effect exerted on the prices of petroleum products." The plan was an emergency measure and terminated at the close of the emergency. The features of the undertaking involved cooperative action under patriotic motivation, regulation of trade movements in the commodities involved, and a retardation of price advances.

The Inventory Plan

The next collective plan to make its appearance in the petroleum industry was not formalized into an agreement, but arose from a prevailing state of mind that led to parallel action on the part of many units in the industry. This concert of policy can hardly be termed a collective plan in the strictest sense of the term, for cooperation and collusion may have been wanting from it and the element of competition between individual policies was present in it; yet, on the whole, the resulting action visible to the observer was tantamount to collective effort along a single line.

The entire concept here presented must be deducted from the recorded events that transpired and is not based upon documentary evidence. A study of the crude oil situation from about 1920 to 1927 reveals two striking features: (a) A succession of sharp up and down swings in the price of crude oil, a complete cycle being witnessed almost every year; and (2) a large accumulation of crude oil inventories. These circumstances, coupled with the fact that the industry had derived a crude oil scarcity complex from the war era of rising prices, indicate that there was a concert of plans to stabilize the industry by augmenting speculative purchases when prices were low. The motivating force was speculative on the theory that impending scarcity would create a profit; the mass effect, not perhaps appreciated at the time, was an inflation in demand that brought about higher average price levels than would have otherwise prevailed. The price levels thus created stimulated additional production so that not only did scarcity not eventuate, but on the contrary overproduction was sustained, and the accumulated results of this overproduction were retained by the industry in the form of a large inventory of crude, which is still on hand.

The Proration Plan

The third large plan that matured in the petroleum industry involved the activities combined under the term "proration." The proration plan did not spring into existence full grown but evolved from a small beginning and is still changing in structure. While initiated by collective action, this plan was not fundamentally of artificial origin but was the resultant of powerful economic forces engendered by the so-called rule of capture in oil field development, when operating in the presence of excess capacity and violent changes in technology brought on by overcapitalization. Proration in an incipient state had made its appearance on previous occasions but in each case was abandoned upon the passing of the emergency that brought it into existence. Proration appeared again in 1927 to handle what was then believed to be a temporary period of overproduction in the Seminole area in Oklahoma. It was at first a voluntary effort localized in a single area, but as overproduction continued there and spread to other sections, the proration function grew in scope and became institutionalized through enactment of legislation in several oil producing states and through crystallization of trade practices.

The failure of the inventory plan made proration inevitable, once the momentum of supply carried unmistakably beyond consumptive requirements. The only alternative manner in which the economic forces could have relieved themselves would have been by direct impact with the rule of capture and through that encounter destroying it. Instead, the sequence of events followed an oblique course and modified the rule of capture by means of the institution of proration. It is manifest that the oil industry cannot function under an unmodified rule of capture, in the presence of production momentum in excess of market requirements. To debate, then, the desirability or otherwise of proration is to waste time upon an academic question: until nature reestablished equilibrium, there are only two alternative procedures in the conduct of the petroleum industry; either the use of proration (in some form) as a production control or the destruction of the rule of capture. The former course has been elected by events and perhaps this avenue is one through which the rule of capture is to be slowly and laboriously done to death.

The proration plan has impressed far-reaching consequences upon the petroleum industry; some favorable, others harmful. On which side the balance lies is probably a problem in relativity; the subject is vastly complicated and in this place it must suffice merely to list the outstanding effects, as follows:

(a) Proration sustained oil prices for a period but did not prevent an eventual decline in price levels.
(b) Proration permitted the accumulation of a large hidden "inventory" in the form of the crude oil potential (i.e., drilled up but suppressed production).
(c) Proration led to major overdevelopment of marketing facilities as a terminal expression of the crude oil potential.
(d) Proration led to proliferation of state regulatory laws and brought the operation of the industry into the political arena. At the same time it led to advancement in the scope of state conservation laws.
(e) Proration contributed to a change in the price concept, weakening the role of price as a mechanism for equalizing supply and demand, and furthering the idea of price as a reward of merit.
(f) Proration built up a method of production control for balancing supply and demand in a volumetric sense, but in so doing stimulated disparity between the pressure aspects of supply and demand.
(g) Proration caused a major advance in the technique of crude oil production by forcing many fields to be operated under conditions creating some to many of the efficiencies of unit operation..[2]

The proration plan involves a system of quotas limiting crude oil production to estimated demand. Within the states the estimated demand is allocated to the separate fields and to the individual leases comprising the fields through the agency of state regulatory bodies or cooperative committees; and enforcement is based upon state laws prohibiting waste. The determination of state quotas, always a difficult problem, was first systematically attacked by the Federal Oil Conservation Board in 1930, when it appointed a Committee on Petroleum Economics to prepare advisory state allocations—a function which has been carried over into the petroleum code. The idea of a possible need for a more formal coordination of the several states has given rise to periodic attempts to develop an Interstate Oil Compact, which would bring the oil-producing states and the federal gov-

[1]See Pogue and Lubin: Prices of Petroleum and Its Products, 7-8, 26-29. War Industries Boards, Washington, 1919.
[2]Unit operation, it should be noted, involves the complete negation of the rule of capture.

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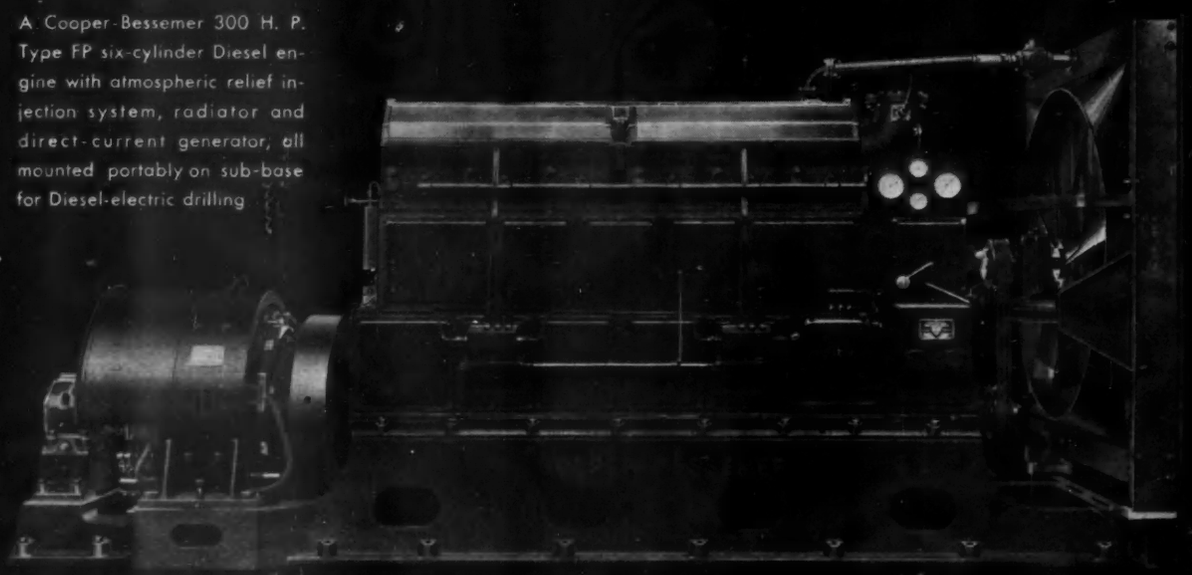

ernment into a joint plan of production control.

The proration plan, contrary to the war plan and the inventory plan, has not been superseded but was utilized and elaborated under the ensuing program of the code plan.

The Code Plan

The code plan originated in the social and economic stress of the depression and therefore was superimposed upon the industry, which willingly lent its cooperation because the new instrumentality of control was developed in the midst of one of the periodic breakdowns in the functioning of proration. Thus the code plan bears more structural resemblance to the war plan than to the two intermediate plans: the war plan and code plan were initiated by forces outside the confines of the oil industry proper and each involved cooperation between the federal government and the industry, with the principle of industrial self-government brought to the fore; the inventory plan and proration plan were internal in origin and only one of them transgressed the industrial boundary, and that only to the extent of involving the police power of the oil producing states. All efforts to create a new variant, by engaging the federal government and the states in the joint enterprise, have thus far failed, wrecked on the shoals of states' rights, although such efforts have lately been renewed under the leadership of the governor-elect of Oklahoma.

The petroleum code rests upon the authority of the National Industrial Recovery Act and the objectives of the petroleum code may be stated to have been: (a) to improve the buying power and working conditions of labor; (b) to balance supply and demand; (c) to restrict importations of oil; (d) to conserve the resource; and (e) to "stabilize" oil prices. The code carried price-fixing sections which were never invoked in a formal manner, although the operation of the code contributed to a pegging of crude oil prices at a dollar level, to an advance in discounts allowed gasoline resellers, and to numerous attempts to bring gasoline prices at wholesale and retail into a parity zone relative to the dollar base for crude oil.

It is perhaps too early to arrive at impartial judgment as to the initial results of the code plan, but as in the case of the proration plan the consequences have been far reaching, some advantageous and others harmful. The subject is very involved and the attempt can only be made here to list, with scant discussion, the principal effects of 16 months' operation under the code.

(a) The code plan through control of production maintained approximate volumetric equilibrium between supply and demand, but was aided in this objective by the instrumentality of proration which the plan embraced but did not originate. The code plan was less successful in regulating the PRESSURES of supply and demand, so that a balanced price structure was not achieved.

(b) The code plan restricted the volume of imported oil, but did not coordinate the program in respect to the different commodities affected and the international aspects of such action.

(c) The code plan passed over the fundamental cause of dis-equilibrium in the petroleum industry, the rule of capture, and concentrated its conservation efforts upon the development of plans for the drilling of new oil fields.

(d) The code plan sought to freeze crude oil inventories, thus tending to prevent the liquidation of the economic error committeed during the operation of the inventory plan.

(e) The code plan devoted much time and effort to the creation of artificial price conditions through price-fixing of one sort or another.

(f) The code plan contributed to the expansion of an already overdeveloped marketing situation by stimulating increases in reseller margins.[3]

(g) The code plan created a far-flung and complex organization for the direction and enforcement of the plan; and lead to a centralization of authority in two bodies representative of the federal government and of the industry.

(h) The code plan developed a Federal Tender System which proved for a period to be an effective instrumentality in regulating the shipments of "hot" oil from the East Texas Field.

(i) The code plan applied the system of centrally coordinated production quotas developed by the late Federal Oil Conservation Board and sought to extend a similar procedure to the field of refining.

(j) The code plan enlarged the share of labor in the gross income of the industry and increased the bargaining strength of labor in respect to rates of pay and conditions of work.

(k) The code plan emphasized the national aspects of the petroleum industry and sought to establish the authority of the federal government to regulate the movement of oil across state boundaries when in excess of state production quotas.

(l) The code plan assisted the industry to make modest profits but was aided in this result by underlying improvements in the industry arising from natural causes.

(m) The code plan brought all elements in the industry into closer contact with problems of collective management and contributed an important stimulus toward the better understanding of these issues.

Characteristics of Collective Planning

The data provided by four examples are obviously a meagre basis for deductions of general application. Nevertheless the field of observation is one of the best available and at least the indicated tendencies may be noted as characteristic phenomena, without implication as to their continuity or extension. Whether undertaken by the industry as a whole or by governmental authority, or by the two in combination, the nature and functioning of collective planning seem to run rather consistently along parallel lines. The outstanding features of collective planning as exemplified in the petroleum industry appear as follows:

(a) Collective plans are developed in periods of economic stress to prevent the extension of undesired tendencies.

(b) The motives for collective planning are expected profits—financial, political or social.

(c) The avowed purposes of collective planning are price stabilization, prevention of waste, and redistribution of advantage.

(d) The methods used in furthering collective plans are cooperation, legal coercion, and centralization of authority.

(e) The sposors of collective planning are the industry, the state or the two in conjunction.

(f) Collective planning tends to be diverted from fundamental considerations and to address itself to opportunistic measures. To win popular support, collective planning is forced to work toward the attainment of primary economic resultants, overlooking the secondary and tertiary consequences which are often the reverse of the objectives sought.

(e) The sponsors of collective planning are upon price regulation, seeking to direct price movements along lines favorable to preconceived objectives. This aim is sponsored by measures designed to alter the forces of supply and demand, but overt price-fixing efforts are employed as a major instrumentality. The sharp focus on price results in the creation of counter economic pressures that call forth additional measures for their control.

(h) Collective planning leads towards progressive complexity in administration and increasing centralization of authority.

(i) Collective planning is a powerful instrumentality of change and its application should be the subject of critical study in order to eliminate such of its imperfections as may be purely functional.

Trend of Collective Planning in the Petroleum Industry

This brief review is perhaps sufficient to indicate that collective planning in the oil industry has developed by a series of stages and presents an evolutionary aspect. The industry is now operating under a collective plan, or more properly under a combination of two collective plans, with progressive changes in structure still under way. While the drift is toward still further complication in structure, the end-point in the process of change cannot be clearly perceived. The alternative destinations, however, may be blocked out in rough outline, as follows:

(a) A fully centralized plan, under federal authority, tending to restrict competition, regulate volume and prices, and limit growth and change.

(b) A decentralized plan combining proration with relative freedom of prices and preservation of competition.

(c) A reversion to competitive planning.

[3]The marketing situation, which has attracted such a plethora of discussion, is fundamentally simple; merely permit retail prices to be wholly governed by wholesale prices, with a narrow spread between, and everything possible will have been done to recreate economic balance in this department of the business. But this price relationship is exactly what both the code plan and the industry prior to the code have striven sedulously to avoid—perhaps with some reason, so far as the code plan is concerned, for oil marketing is a social problem as well as an economic one. The oil industry has been severely criticized for the waste involved in the extensive duplication in its gasoline distributing facilities and efforts. From the point of view of social reform, however, it would seem that far from being censored on this score, the industry should be commended for creating such an effective mechanism for the redistribution of wealth.

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A. I. M. E. Members Study Future Operations

(*Continued from page 19*)

noon session. James Terry Duce, of The Texas Company at New York, was chairman in charge of the oil production symposium in both its domestic and foreign sections; while Benjamin C. Craft served as vice chairman on the domestic fields program, and V. R. Garfias of Henry L. Doherty & Company, New York, as vice chairman in connection with the foreign fields section.

The papers on oil production within the United States included on the program were as follows: Arkansas, by H. K. Shearer; California, by V. H. Wilhelm and H. W. Miller; Colorado, by C. E. Shoenfelt; Illinois, by Alfred H. Bell; Indiana, by W. N. Logan and J. P. Kerr; Kansas, by Marvin Lee; Kentucky, by Coleman D. Hunter; Louisiana, by B. C. Craft; Michigan, by Theron Wasson; Mississippi, by B. C. Craft; Missouri, by Frank C. Greene; Montana, by Hugh A. Stewart; New Mexico, by C. E. Shoenfelt; New York, by Neil S. Sullivan; Ohio, by Dewitt T. Ring; Oklahoma, by L. L. Foley and C. V. Millikan, who acted as committee of Mid-Continent Section of the A.I.M.E.; Pennsylvania, by S. H. Cathcart; Tennessee, by Walter F. Pond; Central Texas, by R. B. Kelly and Paul R. Martin; North Central Texas, by T. F. Petty; North Texas, by H. B. Fuqua and B. E. Thompson; East Texas, by A. R. Denison; Southwest Texas, by Olin G. Bell; Texas Gulf Coast, by W. B. McCarter; Texas Panhandle, by T. C. Craig; West Texas, by H. B. Fuqua and B. E. Thompson; Utah, by Harald W. C. Prommel; West Virginia, by David B. Reger; and Wyoming, by John G. Bartram.

Foreign Fields

The symposium on oil production in foreign countries represented a comprehensive review of developments during the past year in fields outside the United States. Papers on the program included the following: one on Japan; a paper on Ecuador, by L. W. Berry; Poland, by Charles Bohdanowicz; one on Italy; France, by H. D. Cizancourt; Iraq, by Ben B. Cox; Cuba, by Roy E. Dickerson; Venezuela, by E. L. Estabrook; Rumania, by Mr. Walters; Mexico, by V. R. Garfias and R. V. Whetsel; Arabia and Bahrein, by G. Clark Gester; China, by Amadeus Grabau; Argentina, by Guillermo Hileman; Peru, by O. B. Hopkins; Colombia, by O. C. Wheeler; Canada, by George S. Hume; Russia, by M. D. Joel; Germany, by Walter Kauenhowen; Persia, by George M. Lees; Europe (Central), by Walt M. Small; Burma, by L. Dudley Stamp; Dutch East Indies; Australia, by W. G. Woolnough; Bolivia, by Jorge Munoz Reyes; Trinidad, by A. L. Owens; and Egypt and India.

Thursday morning was left open on the petroleum division program to permit participation in a program on the use of metals in the petroleum industry. That program represented a symposium held jointly by the Petroleum, Institute of Metals, and Iron and Steel divisions.

Petroleum Economics

Papers on petroleum economics were presented on the Thursday afternoon program of the petroleum division of the Institute, that session being conducted with S. A. Swensrud as chairman and Joseph E. Pogue as vice chairman. The papers on the program included the following: "Domestic Consumption of Motor Fuel," by Albert J. McIntosh; "Forecasting Relative Price Movements of Petroleum Securities," by Norman D. Fitzgerald; "Collective Planning in the Petroleum Industry," by Joseph E. Pogue; "Proven Reserves of Mineral Fuels in the United States," by V. R. Garfias; "World Petroleum Consumption, 1932, 1933, and 1934," by R. V. Whetsel and V. R. Garfias; and "Current Problems in Petroleum Marketing," by L. V. Nicholas, president of Warner-Quinlan Company.

To conclude the petroleum division sessions there was an annual dinner of the division at the Commodore Hotel Thursday evening, at which an informal talk was given by W. S. Farish, chairman of the board of Standard Oil Company (New Jersey). Presiding at the dinner was H. D. Wilde, Jr., of the Humble Oil & Refining Company, at Houston.

Metals in Oil Industry

The symposium on the use of metals in the petroleum industry was included in the Thursday sessions. In the morning there was discussion of the use of metals in the production of petroleum, participated in jointly by the Petroleum, Institute of Metals, and Iron and Steel divisions. In the afternoon there were papers on metals used in the refining branch of the oil industry.

For the morning session, on use of metals in the production of petroleum, P. E. McKinney served as chairman, and H. D. Wilde, Jr., as vice chairman. Papers and discussions on the program included the following: "Tanker Corrosion," by C. E. Brown; "Drill Tools," by A. G. Zima; "Economical Selection of Sucker Rods," by A. B. Westcott and C. N. Bowers; and "Corrosion Tests in Various Refinery Services," by J. E. Pollock, E. Camp, and W. R. Hicks.

On the Thursday afternoon program, embracing the symposium on use of metals in the refining of petroleum, W. G. Whitman was chairman, and J. L. Christie vice chairman. The subjects taken up included the following: "Weldless Pressure Vessels," by F. B. Foley; "Heat Interchangers," by H. L. Bedell; "Materials Used in Oil Refinery Pumps," by A. E. Harnsberger; and "Heat and Corrosion-resisting Alloys," by W. F. Furman.

Geophysical Papers

Geophysical papers were scheduled for sessions on Monday, Tuesday, and Wednesday. The Monday afternoon papers on geophysics dealt with geophysical technique and were thus of specialized interest. That session was conducted with L. B. Slichter as chairman and E. De Golyer as vice chairman. It included the following papers: "An Instance of Abnormal Magnetic Polarization in South Africa, Together with a Graphic Method for Determining Effects of Magnetic Pole Distribution," by F. Bahnemann; "Observations on Compensated Magnetometer Systems," by Mark C. Malamphy and Irnack C. Do Amaral; "Electrolysis of Buried Pipe Lines and Conductors," by C. and M. Schlumberger, R. Gibrat, and E. G. Leonardon; "Measuring the Apparent Resistivity at the Surface of the Ground," by Arnaldo Belluigi; and "Teaching Applied Geophysics in France," by E. Rothe.

On Tuesday morning geophysical exploration for non-metallics was considered, the session being under guidance of Oliver Bowles as chairman and M. King Hubbert as vice chairman. Papers on that program included "Pioneer Magnetic Exploration in the Texas Panhandle," by Noel H. Stern; "Torsion Balance Survey for Sulfur at Hoskins Mound, Brazoria County, Texas," by Donald C. Barton; "Application of Earth-resistivity Method to Sand and Gravel Surveys," by Stanley W. Wilcox; and "Further Electrical Geophysical Work in the Fluorspar District of Illinois and Kentucky," by M. King Hubbert.

The Tuesday morning program represented an international symposium on Geophysics in Geology, with E. De Golyer serving as chairman and Sherwin F. Kelly as vice chairman. Papers for the session were as follows: "Geophysical Investigations Upon Mineral Deposits in Southern Africa," by Rudolf Krahmann; "Magnetometric Survey of a Kimberlite Pipe in Southwestern Transvaal," by Rudolf Krahmann; "Geophysical Methods of Prospecting Used to Develop Poland's Mineral Resources," by Z. A. Mitera; "Brief Survey of the Applications of Geophysics in South America," by Mark C. Malamphy; and "Geophysical Surveys in Canada Locate Gold Mine and Aid Shaft Sinking," by Hans Lundberg.

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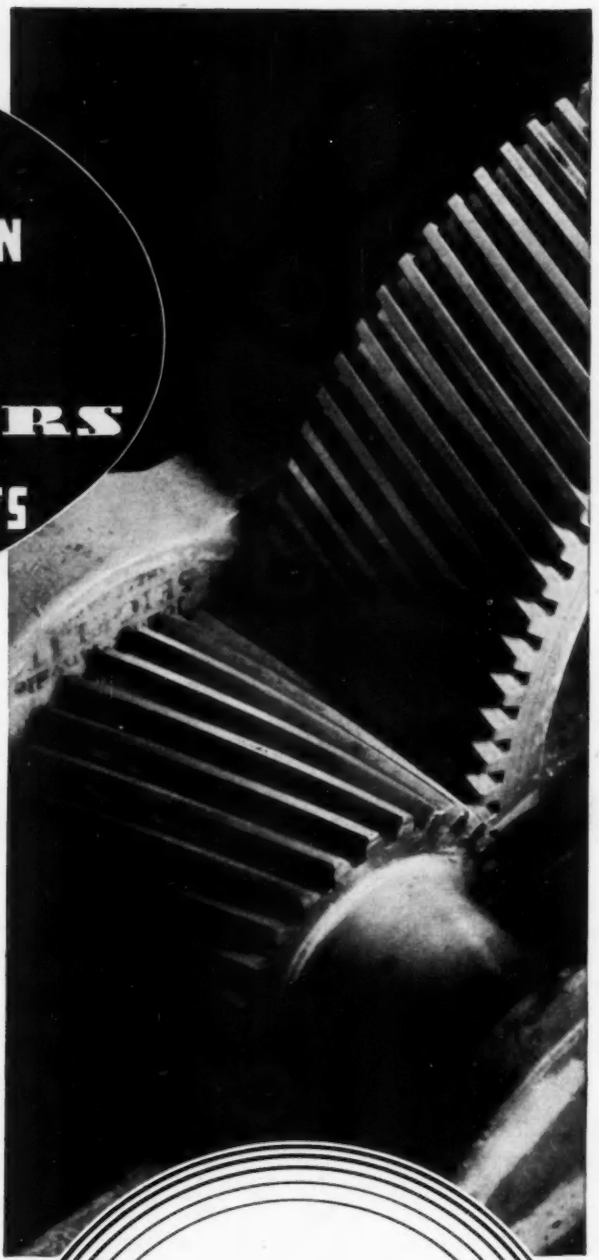

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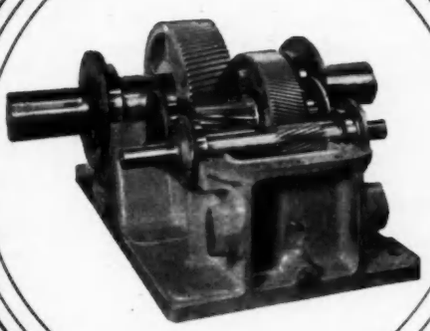

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geophysical subjects was a continuation of the morning program, with Sherwin F. Kelly as chairman and W. B. Heroy as vice chairman. Papers on the afternoon program included the following: "Role of Applied Geophysics in the Work of Brazil's Mineral Production Service," by Mark C. Malamphy; "Magnetic Prospecting on the Witwatersrand," by Leopold Reinecke; "Geophysics Used by Geological Survey of Spain to Elucidate Geological Structures in Mineral Regions," by Louis de La Pena and J. G. Sineriz; and "Proposed Geophysical Atlas of the International Union of Geodesy and Geophysics," by E. Rothe.

Kingsbury Reappointed To Planning Committee

Washington, D. C. — Reappointment of Kenneth R. Kingsbury, president of the Standard Oil Company of California, as a member of the Planning and Coordination committee was announced February 19, by Oil Administrator Harold L. Ickes.

Mr. Kingsbury resigned from the committee March 31, last, and although there have since been several changes in membership, he is in effect appointed to the vacancy created by his own resignation.

Harry Power Heads A. I. M. E. Oil Section

During the annual meeting of the American Institute of Mining and Metallurgical Engineers at New York last week announcement was made of the election of new officers and members of the executive committee of the petroleum division of the institute.

The new officers are as follows: Harry H. Power, Gypsy Oil Company, Tulsa, chairman; John F. Dodge, associate chairman; and Eugene A. Stephenson, secretary-treasurer.

The new executive committee will consist of Harry H. Power, chairman, and the following members: A. W. Ambrose, Empire Companies, Bartlesville, Okla.; E. O. Bennett, Continental Oil Company, Ponca City; E. G. Gaylord, Standard Oil Company of California, San Francisco; H. J. Wasson, consulting engineer, New York; and H. D. Wilde, Jr., Humble Oil & Refining Company, Houston.

M. Albertson, Shell Petroleum Corporation, Houston, was elected vice chairman for production engineering, and each of the following as associate vice chairman for production engineering: Robert E. Allen; Douglas Collingwood and L. L. Foley.

J. Terry Duce, The Texas Company, New York, was chosen vice chairman for production and Benjamin C. Craft associate vice chairman for production.

Other new vice chairmen will include T. V. Moore, Humble Oil & Refining Company, Houston, for engineering research; Sidney A. Swensrud, Standard Oil Company of Ohio, Cleveland, Ohio, for economics; and Walter Miller, Continental Oil Company, Ponca City, for refinery engineering.

Earl Oliver, Ponca City, Oklahoma, will serve as chairman of the stabilization committee.

The 9000 members of the general institute itself chose as officers for the coming year: Henry A. Buehler, president; John M. Lovejoy and Paul D. Merica, vice presidents: Buehler replaces the retiring president, Howard N. Eavenson. The new president is state geologist and director of the Missouri Bureau of Geology and mines.

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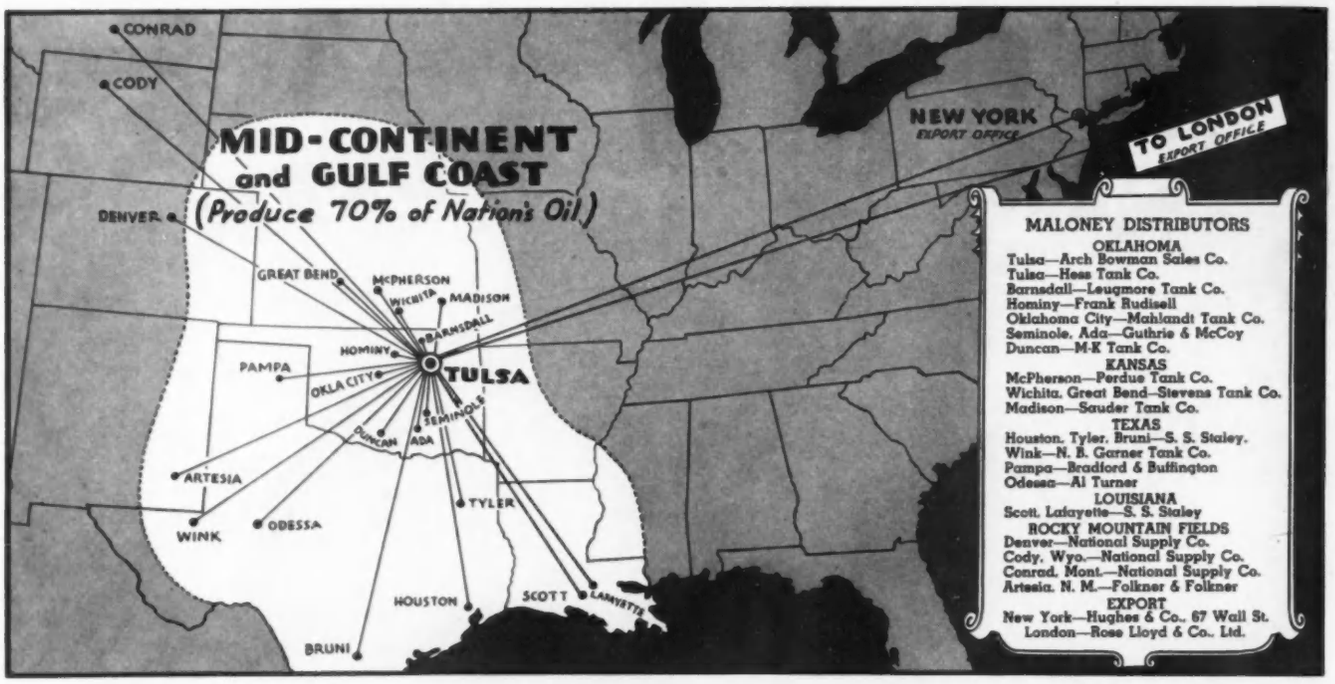

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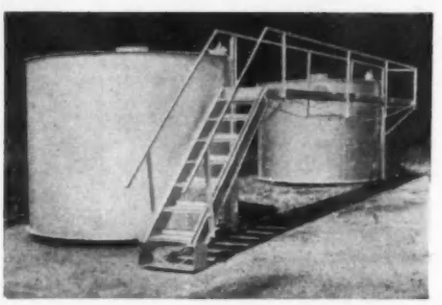

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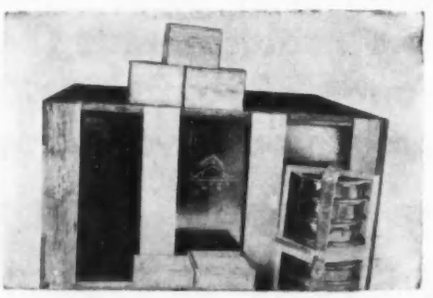

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More Than 5000 Additional Wells *May Be* Drilled in East Texas

East Texas well density has not reached per acre average of other Woodbine sand fields

H. H. KING
Staff Representative

REMOVAL of restrictions on the spacing and drilling of new wells in the East Texas field, which has been drilled to an average density of one well to about 7.3 acres, is not a remote possibility. Majority of the 16,000 completed oil wells on the 117,500-acre producing structure were drilled as exceptions to the Texas Railroad Commission's Rule 37, governing well spacing. In recent months district courts repeatedly have overruled the commission in denying applicants permits for additional wells on densely drilled leases, thereby virtually nullifying the restrictions for lease owners willing to bear the cost of an injunction. The commission has been enjoined in a few instances by operators resorting to federal court for relief.

Eventual drilling of from 5000 to 7500 additional wells in the field is no longer a mere possibility. It is a probability. The total will be determined largely by the ability of the field to maintain its natural flow, else by the outcome of test cases now pending in the courts. Authority of the commission to grant exceptions to Rule 37, and a challenge of the district court's power to overrule the commission in denying a permit will be decided during the current year by test cases scheduled to be carried to the Supreme Court by companies seeking to limit drilling to an economically sound basis.

Protests against the elastic policy followed by the commission in granting exceptions to its spacing rules have been made repeatedly by companies and operators desirous of avoiding uneconomic drilling in trying to match offset wells. Rule 37, as applied to the East Texas field was amended May 29, 1934, to require a special hearing at Austin headquarters on applications to drill less than 150 feet from property line, or less than 300 feet from a drilling or completed well. This revised order played into the hands of a large corps of so-called politically influential attorneys that make a specialty of procuring exceptions to Rule 37. Long lists of approved exceptions issued each week bear the Austin address of the attorney handling the case. Attorneys specializing in obtaining permits usually exhaust their "bag of tricks," such as wearing down the opposition of adjoining lease owners having objections, and re-filing application under new name, before resorting to the courts.

Number of small leases in the field bearing more than one producer with an average density of one well to less than two acres can be counted by the scores. Many leases within this classification are receiving approved permits to drill more wells, while at the same time it is a matter of record that many applications to drill on leases having an average density in line with the average for the field are refused.

Major units, holding approximately 70 percent of the productive acreage, have drilled their properties to

Density of Oil Wells Drilled in All Woodbine Sand Fields

FIELDS—	Total Producing Wells	Total Producing Acres	Average No. Acres Per Well
East Texas	16,000	117,500	7.3437
Domal Type—			
Cayuga	39	(*)	20.0000
Van	442	4,380	9.9095
Long Lake	2	(*)	20.0000
Fault Type—			
Mexia	550	3,920	7.1273
Corsicana-Powell	750	2,600	3.4666
Wortham	322	715	2.2200
Boggy Creek	29	200	6.8965
Currie	54	475	8.7963
Richland	107	440	4.1121
Nigger Creek	75	170	2.2666
Cedar Creek	14	25	1.7857
Totals	1,901	8,545	4.4950
Unknown Type—			
Rusk	1	10	10.0000

(*) Productive area not defined, but spacing restricted to one well to 20 acres.

an average density of about one well to nine acres, while the independents have an average density of about one well to five acres. The latter have been completing more than 50 percent of the new wells for some months.

Proration of the field on a straight well potential basis places a premium on the crowding of wells on a given lease. Small lease owners predominate in numbers with an overwhelming majority. They won a distinct victory over the majors when they induced the commission to inaugurate the well potential plan of apportioning production beginning April 24, 1933, when there were 9913 completed well. The field is currently proprated to 3.6 percent of the rated hourly flow of individual wells, with a minimum of 20 barrels and a top allowable of about 37 barrels daily per well.

Method of proration as applied to the field is an incentive for the small operators to go the limit in drilling. Wells are drilled and completed for an average cost of $10,000. Numerous drilling contractors and money burdened individuals have standing offers to finance the drilling of new wells on desirable leases for an oil payment. Such deals involve considerations ranging up to $30,000 per well for a turn-key contract, payable from 50 percent or more of the allowable of such wells. This practice was more prevalent during the early life of the field, and a fully owned subsidiary of a major company used this method of financing the drilling of 100 wells.

Should proration continue indefinitely the densely drilled leases will enjoy an accumulated production that is out of proportion to the nearby sparsely drilled tracts, if any remain in that classification when the current drilling campaign is concluded. Majors are the most perturbed over the eventual inequalities in crude recovery.

Average well in the field is prorated to 27.1 barrels daily, or 813 barrels monthly. Figured on a basis of the $1 posting, with the usual one-eighth royalty deducted, the gross income per well for a producer is $711.37½ monthly, or $8,536.50 per year. General overhead and taxes cut into this gross annual return per well for varying amounts, but the net is adequate to induce additional drilling. Many operators contend that the investment of their surplus cash in drilling new wells offers a safer and more attractive return than can be found elsewhere. On the other hand, some reputable geologists and engineers are privately expressing a belief that the field will soon have passed its half-way mark on recoverable oil.

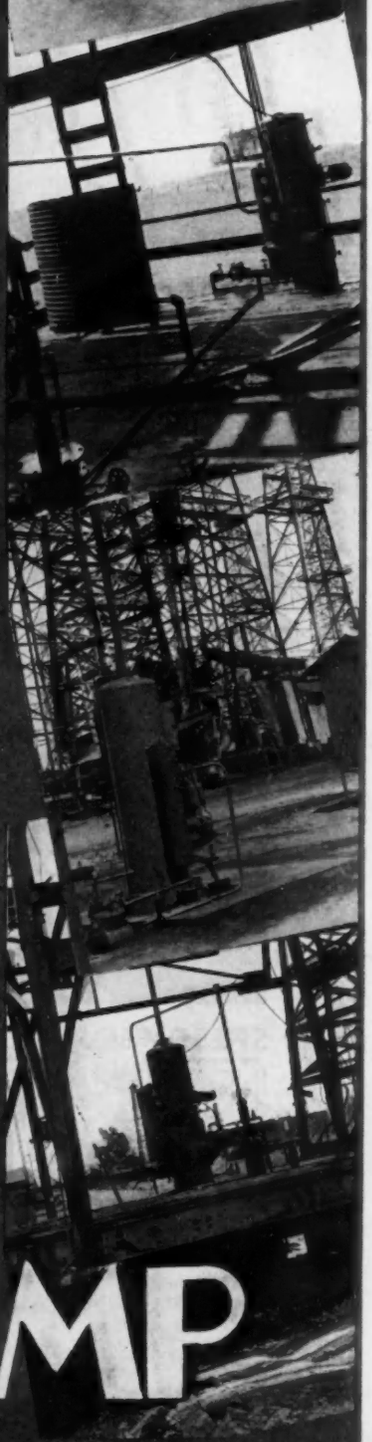
Economic limit on profitable drilling in the field is a debatable issue. Performance of older areas in East Central and East Texas that produce from the Woodbine sand has been exceptionally good as a general rule. Fields uncovered prior to the strike at Van in October, 1929, escaped proration, and all wells were produced virtually wide open, providing transportation, or tankage was available. This policy of operation afforded a quick turnover on lease and development investment, and likewise resulted in a comparatively high recovery per acre. One major company that is rated among the foremost oil producers in the southwest hit its stride in one of the early Woodbine sand fields, and always shows a preference for this class of production over all others.

Fields producing from the Woodbine sand are in a class with the Gulf Coast salt dome belt in affording profitable operations under a high well density per acre. The giant East Texas field is without precedent for the Woodbine area, but in all probabilities will afford an average crude yield per acre comparable with the older fields.

Crowding of wells in Woodbine fields has been a general practice in the past. The eight separate fields of the fault type, including five on the Mexia fault zone, two on a secondary fault zone, and one on the Boggy Creek fault, scored 1901 completed oil wells on an aggregate of 8545 productive acres. This group of fields were drilled to an average density of one well to 4.495 acres per well. Wortham field was drilled to an average of one well to 2.22 acres, while the Corsicana-Powell field, which tops the group on accumulated production, was developed to an average of one well to 3.4666 acres. The Mexia field, original Woodbine oil strike, was never fully developed, because of one company having large tracts, and work was concluded with one well to 7.1273 acres. The same situation prevailed at Currie, which has the widest well spacing of the group.

Van field now has a density of one well to a fraction under 10 acres. It will likely be developed eventually to an average ranging between five and seven acres per well, especially in the thick sand sections of the field. Van has the highest average Woodbine sand thickness, and is certain to overshadow all other fields in the district on crude recovery per acre. It covers a productive area of 4380 acres, credited with an aggregate of 1,167,000 productive acre feet of Woodbine section above the 2500-foot sub sea level. One lease is prorated on a basis of 572-foot average Woodbine section thickness, while several others approach this mark. Additional oil sand below the 2500-foot contour, accepted danger line for bottom-hole water, is disregarded.

In the event East Texas property owners attempt to match average well density with that of older Woodbine sand areas they will impose greater restrictions on the production of individual wells. Allowable production of the field will be about 542,000 barrels daily upon the completion of 20,000 wells, if the prevailing hourly potential rate is permitted. This rate of withdrawal usurps what would be considered by operators in other fields as an unreasonable portion of the state's allowable, while it would likewise accelerate the passing of the flowing life of the field, which is now sensitive to any appreciable boost in the production, as reflected by declines in reservoir pressure.



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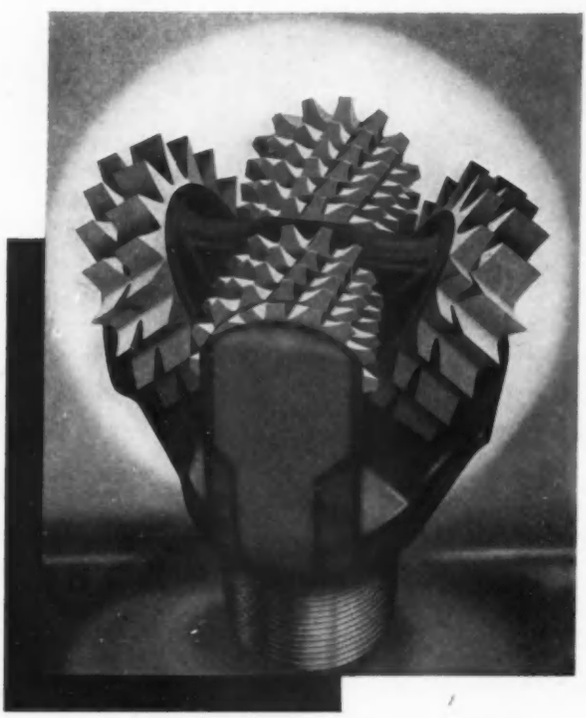

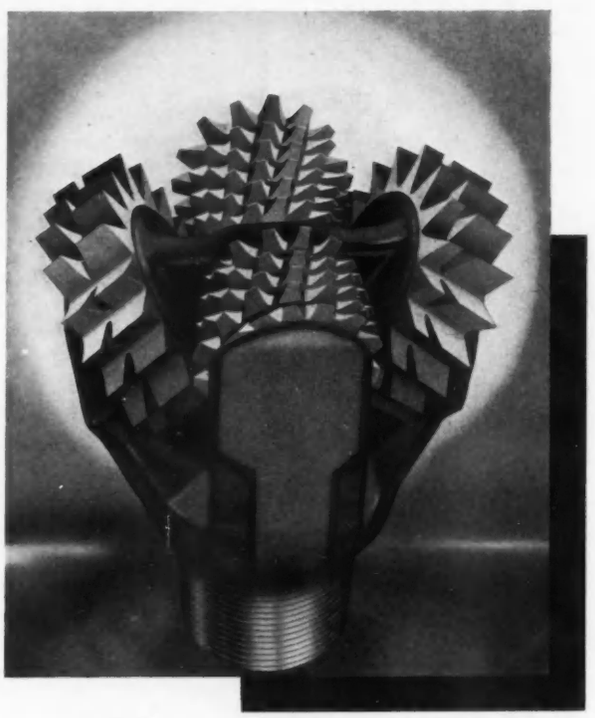

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A Direct-Current Rotary Drilling Rig

SHERMAN J. KLINE

APPLICATION of the direct-current, variable-voltage system of speed control to rotary drilling, together with the evolution of a dual unit arrangement whereby service can be steadily maintained with but one unit in operation, has proved successful from the standpoints of economy, efficiency and extreme portability. The wide range of power flexibility—so desirable for rotary drilling—is an inherent feature which readily lends itself to virtually any drilling condition encountered.

In applying the method it is necessary to provide at least one generator for each motor to be operated, as well as a small unit to excite the fields of all the motors and generators involved. Internal combustion engines are used to drive both the main generators and the exciters, so that each rig is complete within itself and is independent of power lines. The rigs can be operated wherever it is possible to transport ordinary rotary machinery, and both the fuel and water problems are greatly simplified since engines have been developed that will utilize whatever grade of fuel may be available, and which require only a small quantity of good water for cooling the engines. Any kind of water, of course, is suitable for mixing the mud.

One of the direct-current drive power units and the generator control equipment

Each of the engine units on the rig being described consists of a 325-horsepower, 900 revolution per minute, 8½ x 8½-inch, six-cylinder gas engine, direct-connected by means of a flexible coupling to a 150-kilowatt generator, each rated at 175 volts, 850 revolutions per minute, mounted on the same shaft. The weight of each unit is 26,000 pounds. Two exciter units are provided, each of which consists of a 25-kilowatt, 125-volt, 1150 revolution per minute generator, direct-connected to a 60-horsepower, six-cylinder gas engine. The generator control equipment is contained in a steel, weather-proof cubicle mounted on steel skids, and the main engines are started in a unique but effective manner through the two generators in a unit being connected in series and operated as series motors by current from one of the exciter units.

The radiators from the main engines are assembled in separate units, and are placed several feet away from the engines. Two 2-horsepower, 125-volt motors driven from the exciter and controlled by thermostats located in the radiators are used to operate the cooling fans. The two thermostats are set to operate at different temperatures so that one motor will run practically all the time and the other will start up only when it is needed. This arrangement eliminates the frequent starting and stopping of a four-horsepower motor.

The drilling and hoisting motor is rated at 400-horsepower, 350 volts, 1000 revolutions per minute, and 200-horsepower at 175 volts, 500 revolutions per minute. It is totally enclosed and is ventilated by a blower operated by a two-horsepower motor driven from the exciter. The blower unit is permanently attached to the motor frame, and provisions are made for obtaining the cooling air through a pipe at a distance from the rig in case gas is present.

Each of the two pump motors is rated at 275-horsepower, 350 volts, 1000 revolutions per minute, and at 137½-horse-

Both direct-current power units; view taken from rear of the dual unit arrangement

power at 175 volts, and are enclosed and ventilated in the same manner as the drilling motor. One of these may be used as a spare to replace the draw works motor in the event of an emergency. The control apparatus for the motors occupies a very small space on the well floor, and as a protection against fire all the control apparatus has been made explosion-proof.

The smaller of the two generators on either or both of the units is used to supply power to the draw works motor during rotating, while either or both of the larger generators furnish the power for the slush pump. During the hoisting operation, the power of the two large generators is supplied to the draw work motor. The regulation of the various motors during the actual operations is accomplished by the use of a "headache post" control consisting of two handwheels similar to those used for governing the throttle of a steam engine.

After the hole has reached a depth where more power is required for drilling and pumping than one unit is able to generate, the second unit is started, thus throwing the two 70-kilowatt generators in series for drilling and the two 150-kilowatt generators in series for pumping, giving the drilling and hoisting motor a capacity of 140 kilowatts available and the pump motor 300 kilowatts available.

If at any time it should be desired to operate such a rig from an alternating-current power line, the engines may simply be replaced by squirrel-cage induction motors.

With this method there are eight different operating combinations available for meeting any condition of operation which may arise in drilling a well, and a rig so equipped has ample capacity for drilling wells of any depth within the limits of modern practice. Each unit has sufficient capacity for operating the rig, but at a reduced rate in the event that the work is heavy. One of the most impressive things about the method is that practically all the power supplied to a motor at any time is converted into mechanical energy and placed in action at a speed which can be utilized to the best advantage.

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One of the main engine and generator units, with steel-enclosed control equipment at left

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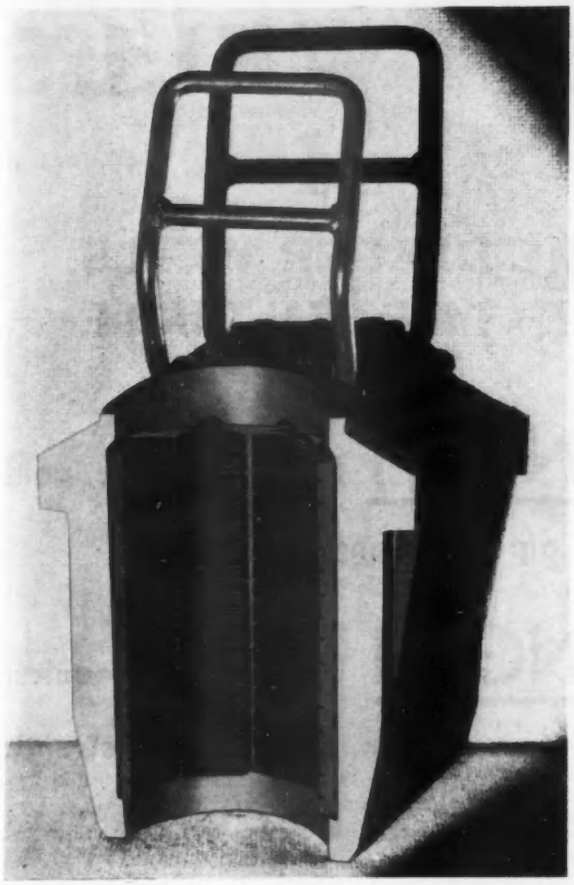

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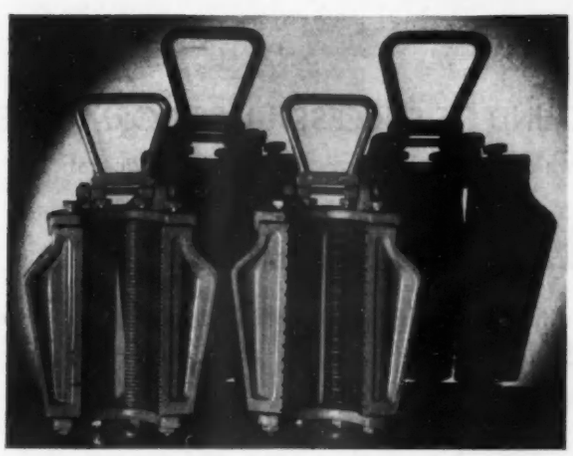

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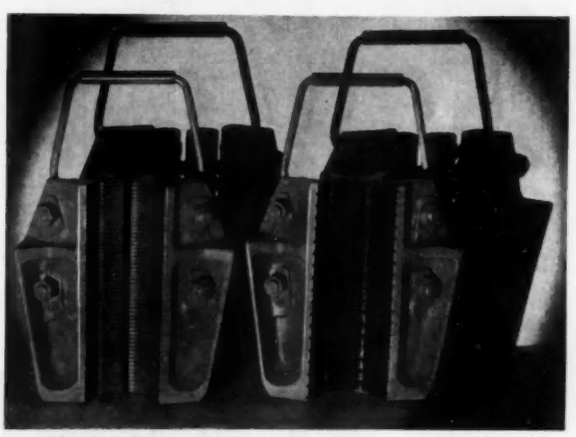

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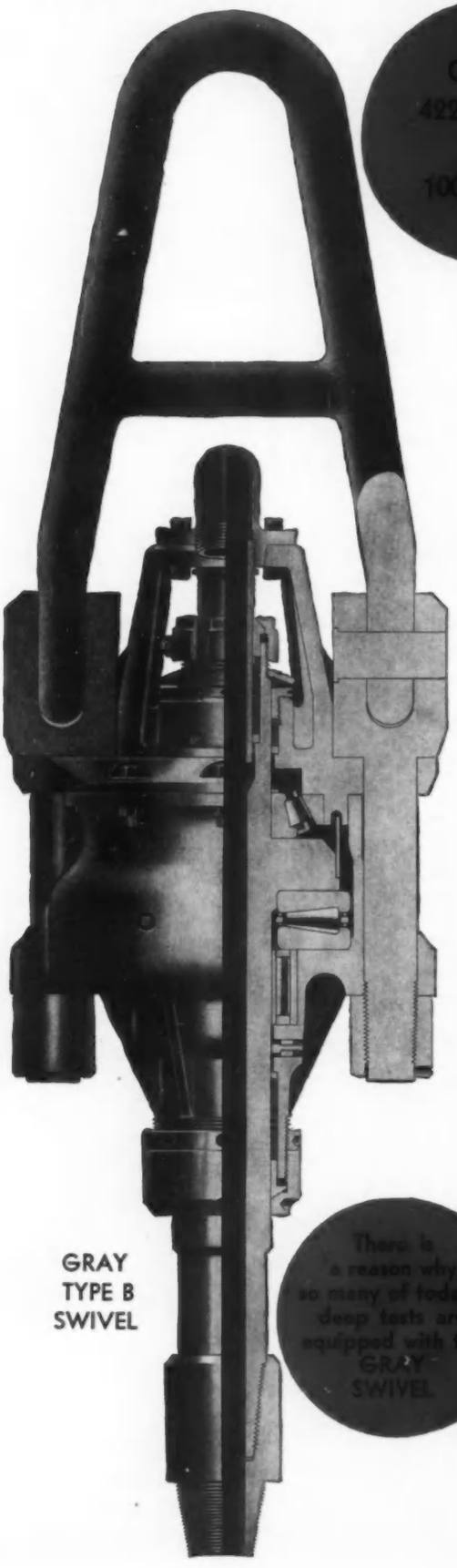

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West Texas Completion Practice Prevents Oil Horizon Contamination

Simple method of drilling in under control proving beneficial to completions and has been applied to rotary cleanout work

BRAD MILLS
Associate Editor

COMPLETION method to prevent contamination of the producing formation is being applied successfully in a number of West Texas fields. Although pressure equipment and flush joint drill pipe are requirements, the practice may be described more properly as a method of drilling in under control. Oil is used as a circulating medium, and high-pressure gas is injected to keep the fluid moving freely, to aerate the column and to assist in bringing the cuttings to the surface.

The completion method has a variety of applications and variations, and may be the solution to the contamination problem in several low- and intermediate-pressure fields, where the producing formation is porous. It has been difficult to keep mud out of producing zones, and considerable evidence has been obtained to indicate that many well failures have been caused by penetration of mud into the porous producing formations. Cleaning, washing and scraping have proved the presence of mud in the formation, but it has been impossible to clean all mud from the producing zones, once it has stopped or seriously checked the well's normal flow.

In cleaning out with rotary equipment after shooting the producing formation with nitroglycerin, a special adaptation of the pressure drilling method has been employed. This cleaning-out practice as now used in Ector County, West Texas, perhaps marks the first attempt to clean out and bring in wells with rotary equipment after shooting. The wells first are drilled with pressure equipment, while the clean-out method after shooting is the same as the drilling method, except that more gas is injected.

The possible adaptation of the method to drilling operations in several low-pressure fields adds increased interest to the practice. The formation pressure in shallow fields and in partially depleted fields often is too low to prevent mud or water from passing into the producing zones during conventional rotary drilling with mud. Many wells that failed to flow during original production tests have made much better showings after washing and scraping operations removed a portion of the mud pushed into the producing zones. The performance of such wells practically proved that mud was shutting off the normal supply of oil, and led to the method of drilling in under control with pressure equipment and with oil as a circulating medium.

The California Company has been a pioneer in the development of a completion program that leaves the producing formation in a position to function fully after drilling has been completed. The practice has been confined chiefly to Ward County, where porous producing formations and comparatively low bottom-hole pressures had permitted penetration of drilling mud into the oil zones. Besides bringing the wells in under control and preventing contamination of the producing formations, the method also gives an accurate log of the oil zones.

Under the original program for Ward County about 2160 feet of seven-inch casing was cemented at 2160 feet, but in later wells it has become common practice to cement the seven-inch casing at about 2343 feet. This is through the dry gas zone, and the 260 sacks of cement is sufficient to exclude a corrosive water zone encountered at 1000 feet.

Drilling below the seven-inch casing is carried on by using 3½-inch, O.D., flush joint drill pipe. Before the cement is drilled, a master gate and blowout preventer are put on the seven-inch casing. When the seven-inch casing is cemented around 2160 feet, a 6¼-inch hole is drilled from 2160 feet to about 2220 feet, at which level an old type stuffing box is placed immediately above the blowout preventer. A tubing snubber, known to the drilling crew as a "whiffletree," is slipped over the drill pipe and held in place by one-inch studs. Upright posts set in the rotary table hold this tubing snubber and turn the drill pipe. About two feet of hole can be drilled before it is necessary to loosen the studs and raise the snubber two feet. It requires less than 1½ minutes to loosen the studs, raise the snubber and tighten it in position.

Clear water is used as circulating fluid while drilling through the dry gas sands encountered from 2230 to 2300 feet. The water and gas return go through a gas trap, the gas being blown to the air and the water returned to the mud pit.

In the average well oil is found in sands between 2460 and 2525 feet. After the oil is encountered and a satisfactory supply developed, the pits are jetted out until the circulating fluid is practically all oil. During the actual drilling-in period, a pressure of about 25 pounds is held on the trap. It is sometimes necessary to tighten the stuffing box head to prevent leakage, but the operation requires only a few minutes.

In changing bits the pipe is raised until the bit is between the master gate and the stuffing box. The master gate is then closed, the stuffing box loosened and removed and the bit brought out. After the bit has been changed, the reverse process is followed in going back into the hole.

The equipment used in drilling in wells by this simple pressure method is an effective means of completing wells without permitting heavy mud to come into contact with the producing zones. It is not entirely satisfactory from a conservation standpoint, however. The main disadvantage is the nominal waste of gas during drilling-in operations. The average well requires about 60 hours to drill through the gas and oil sands, during which time varying amounts of gas are blown to the air and about 600 barrels of oil produced into the pit. The oil may be cleaned at small expense and sold as pipe line oil.

Another advantage offered by the method is that after the well is completed, the drill pipe can be raised about 400 feet from bottom, the pumps shut down and all the circulating fluid blown from the hole. The blowout preventer is then closed and the well allowed to build up its maximum pressure. The release of this pressure causes large quantities of sand from the producing zone to come into the hole, and a bridge is formed. The bridge is cleaned out to bottom with drill pipe.

Using the amount of sand that comes into the hole to form the bridge as a basis for calculations, it is estimated that the average size of the hole is increased from 6¼ inches to 13

inches. This increased size gives the well a greater potential than it would have with the original hole. The sands in this area of Ward County are lenticular and show no tendency toward edge or bottom water. The completion method can do nothing to hasten encroachment of edge water.

One of the greatest advantages to the operator is the fact that while the well is drilling in, the gas and oil are flowing against a pressure of not more than 25 pounds. This condition tends to open and extend drainage channels which would not be affected if the well were drilled in with a hole full of heavy mud.

Gas is injected into the line between the pump and the well head. High-pressure gas is available, and the injection pressure is kept considerably above the pump pressure. The gas keeps the fluid moving freely and gives an aerating effect to the fluid column.

Stanolind Oil & Gas Company has been using a similar completion method in the North Cowden field, Ector County. It has a number of variations and refinements, however, while the flow of the oil and gas used as a drilling fluid is handled in an original manner. The company has gone a step further by applying the method to cleaning-out operations after a shot. It is believed to be the first time that pressure rotary equipment has been used in cleaning-out operations after shooting a producing formation. Rotary equipment has proved satisfactory for this type of work, but injection of gas with the oil used as drilling fluid has been a factor.

In the North Cowden field, seven-inch casing is cemented at about 3950 feet. Clear water is used as a drilling fluid until the gas zone is encountered. Oil is then substituted and the well is completed. The average well is drilled to 4300 feet, and the maximum bottom-hole pressure is 1620 pounds. The special equipment used in drilling in the wells under control and in cleaning out after shooting includes a simple pressure head and 3½-inch flush joint drill pipe.

The flow of the gas and oil used as a drilling fluid is interesting. The returns from the well, including the gas and oil injected as drilling fluid and the gas and oil made by the well during drilling-in or cleaning-out operations, goes to an oil and gas separator. The gas is taken off, while the remainder of the flow passes on to a 500-barrel, two-ring tank.

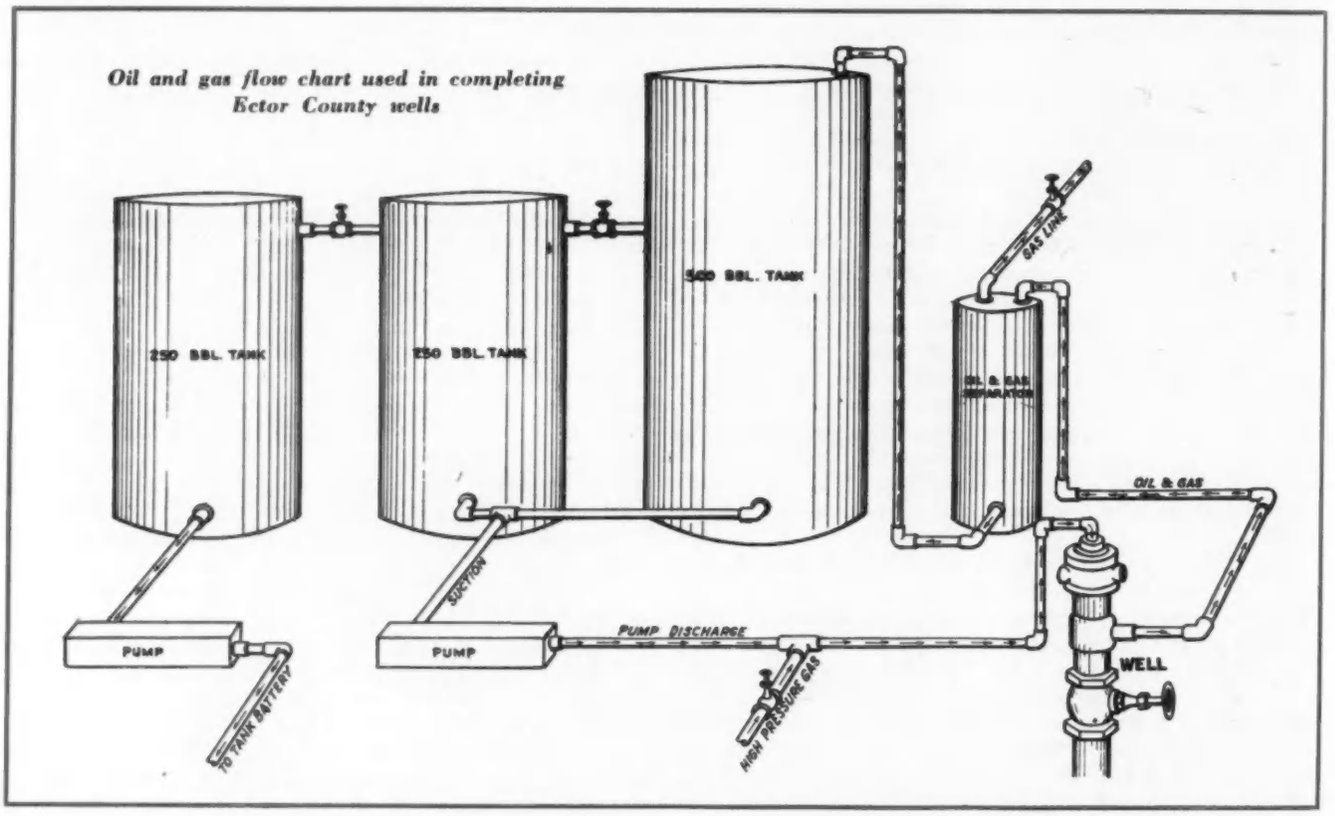
The velocity and force of the flow are so great that a part of the cuttings are carried through the separator and over into the 500-barrel flow tank. For this reason it is necessary to use additional tanks in the flow line. The flow leaves the 500-barrel tank at a level high enough to leave the surplus cuttings in the tank, and goes to a 250-barrel, one-ring tank. The oil in this tank is clean enough to be picked up by the slush pumps and re-circulated.

Surplus oil not used as circulating fluid goes to a third tank, a 250-barrel, one-ring tank. When the oil is making considerable oil, the gain is appreciable. A small pump sends this oil to the main tank battery. Thus the surplus flow of oil made by the well while drilling in and recovered as pipe line oil passes through the separator, the 500-barrel flow tank, the 250-barrel tank from which the slush pump suction is taken, and the 250-barrel auxiliary tank. When the well is not making oil, the first 250-barrel tank obviously handles the full returns from the well.

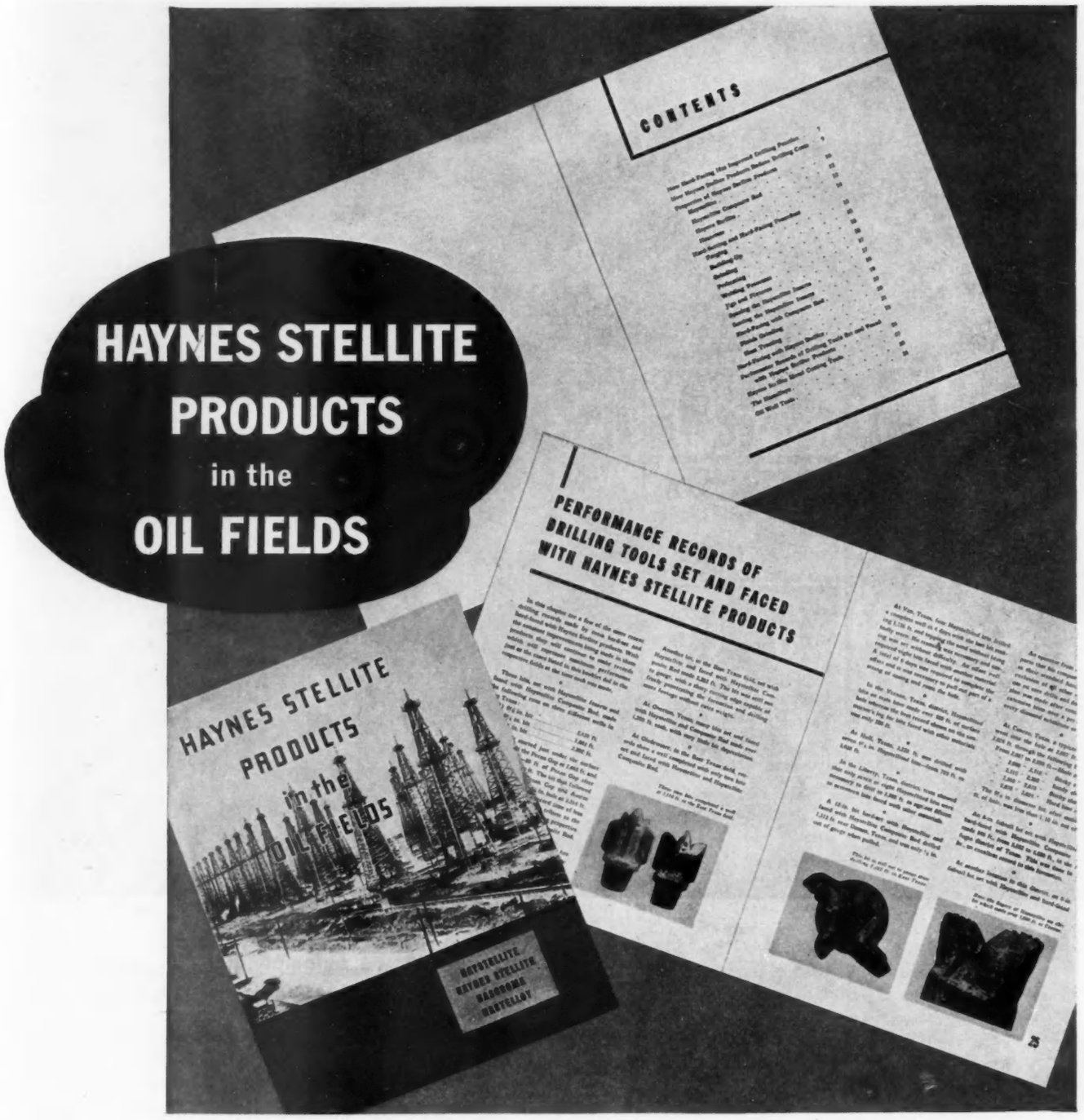
High-pressure gas is injected into the line between the slush pumps and the well head. The gas pressure is much higher than that held on the pumps discharge line, causing the gas to aerate and give the fluid column a more rapid motion. This agitation and buoyancy is reflected in the rapid returns from the well through the gas trap.

Cleaning-out operations after the shot are the same as the drilling method, except that more gas is injected. The hole is cleaned out to bottom, and the performance of completed wells has been satisfactory.

Operators in several low-pressure fields of West Texas are considering the adoption of this completion method to prevent heavy mud from coming in contact with the producing zones. By watching the action of the well and gauging the flow of gas and oil while drilling through the producing formation, an accurate log may be obtained. This method gives the operator a good check on the performance of different strata that may prove useful during future workover or plugging-back operations.



Oil and gas flow chart used in completing Ector County wells



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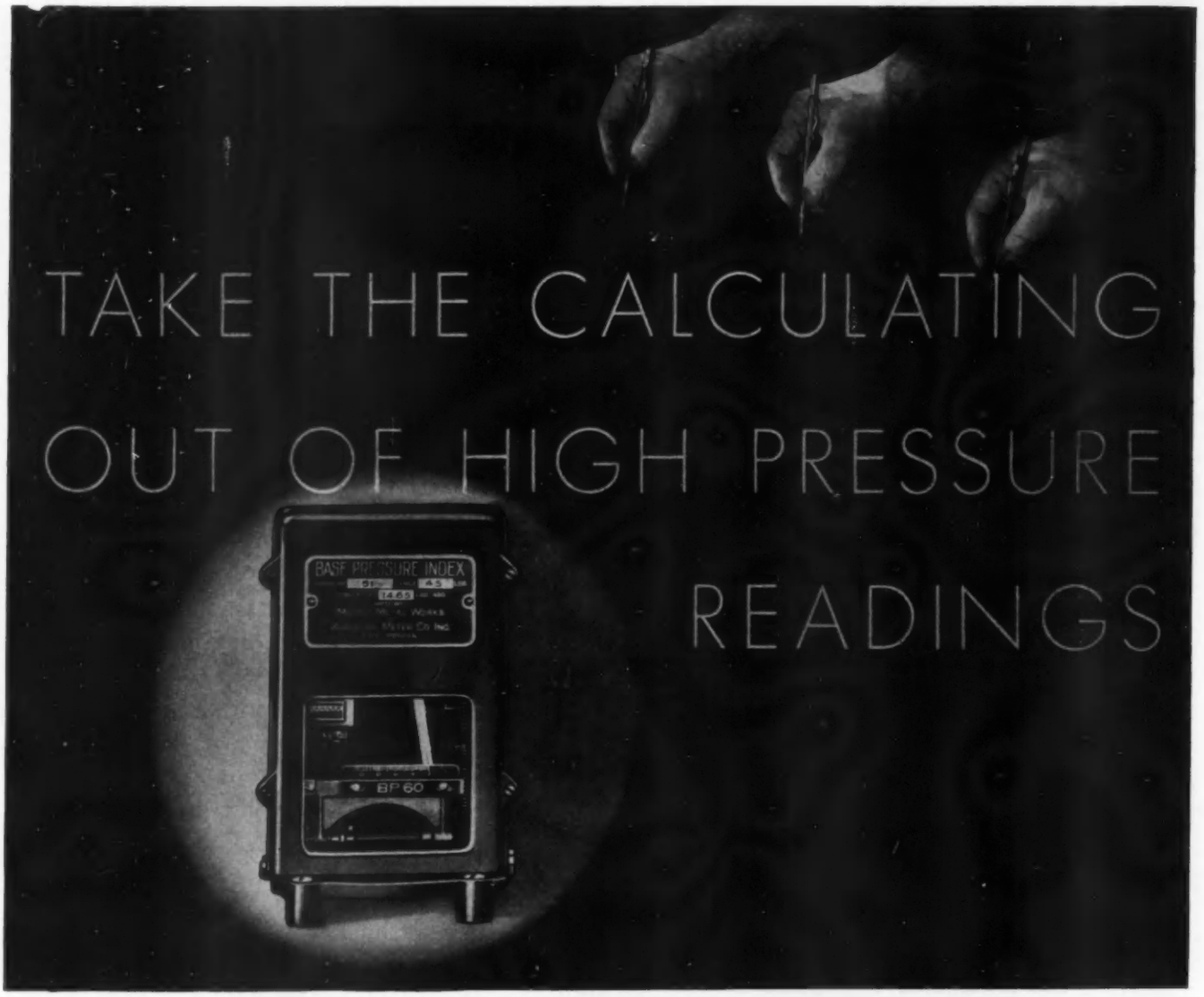

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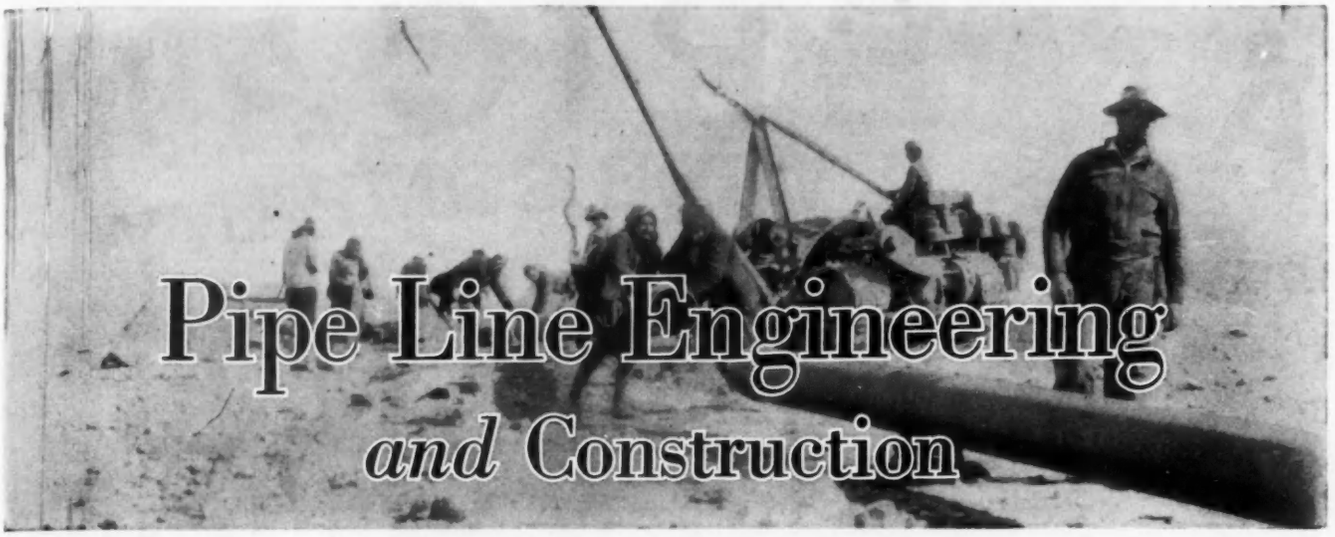


Labeling of Controls
An Aid to Station Operation

« JOHN C. ALBRIGHT »

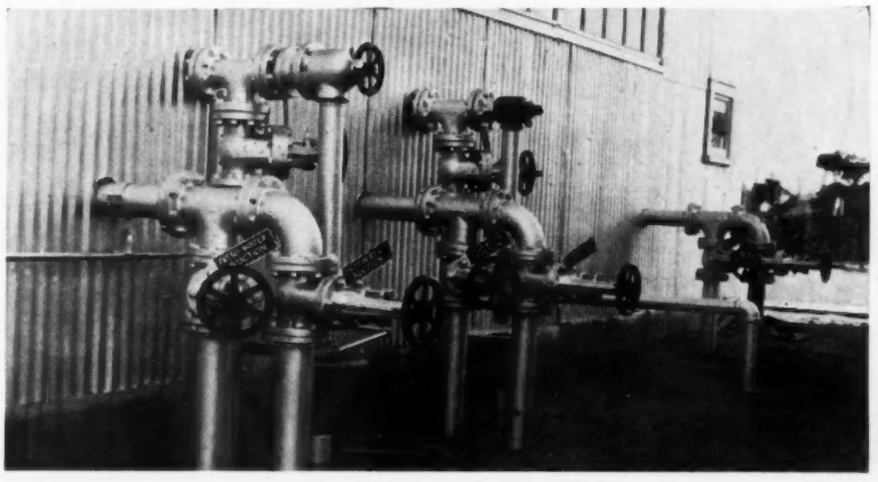
WHEN General Petroleum Company removed its pipe line station from Newhall to a point near San Fernando, it was re-named in commemoration of R. E. Maynard, who was one of the organizers of the original company, and several features were incorporated in the new station that had not been used previously in the older one.

To prevent a new operator from making mistakes, all gates, lines and controls are plainly marked by lettering a large steel tag and placing it on a gate bonnet to designate the purpose of the control. All outside signs of this character are enameled to prevent rusting.

To prevent the station upstream from being shut down because of any operating condition in this plant, a 10,000-barrel surge tank was placed in the yard with a vapor-proof roof. It only functions when the pumps are not being operated, and when they started again, this oil is pumped out along with that being fed into the line through other stations.

The new station is steam operated, using a direct connected compound type engine driving an outside piston-packed pipe line pump. The engine has a 42-inch x 36-inch low-pressure, steam cylinder, and a 26-inch x 36-inch high-pressure one. Steam is generated in a building separate from the pump station room and is furnished dry at 150 pounds. Condensate is removed by a series of steam traps set so that all steam is drained of water before it enters the cylinders of the engine.

After the steam has been used in the high- and low-cylinder, it is transferred to a tube and shell oil heater where the oil temperature is raised from 84 degrees Fahrenheit to 104 degrees Fahrenheit. When it has passed through this heater, the condensate is led back to the boiler feed hot well where it is pumped to the boiler room and used in heating the feed, later to be used as feed also.



Water control gates leading to and from boiler feed pumps in boiler room. Each gate tagged with plainly marked steel plates fastened securely to gate bonnets.

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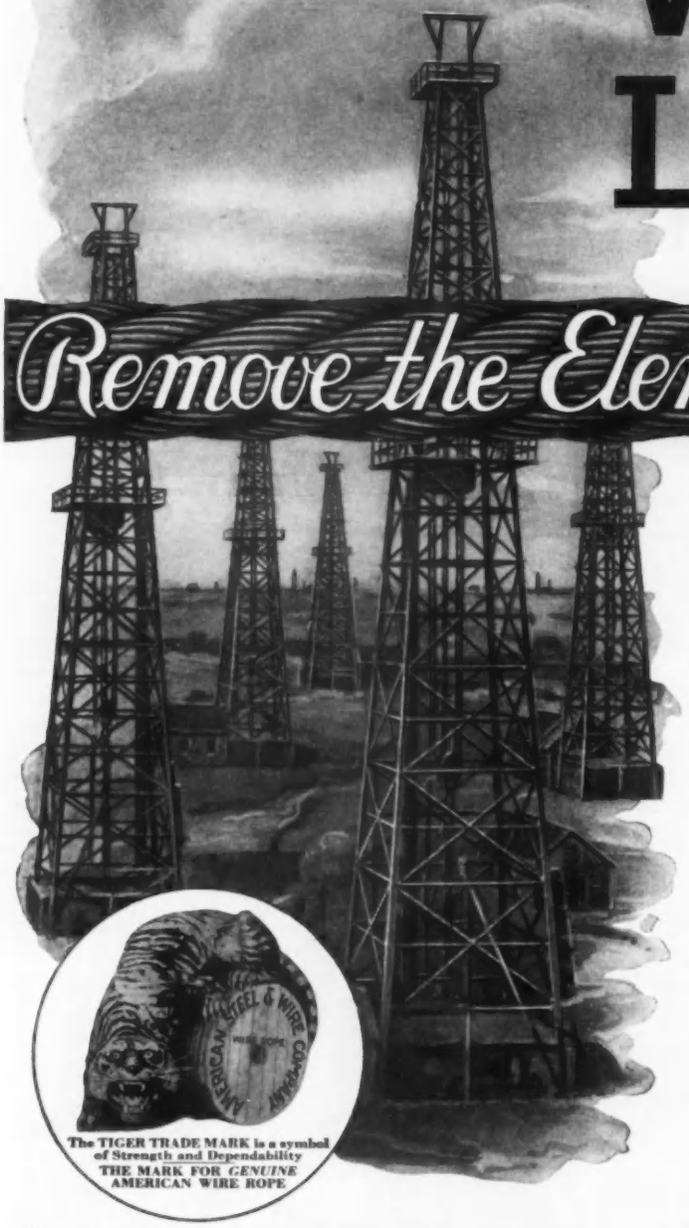
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FOREIGN DEVELOPMENTS AND TECHNOLOGY

Survey of World's Consumption *of* Petroleum Products*

V. R. GARFIAS and R. V. WHETSEL

Foreign Department, Henry L. Doherty & Co., New York

For some time the writers have been compiling and analyzing statistics of consumption and production of petroleum, its products and related fuels, in order to arrive at a fairly accurate picture of the world-wide situation of the petroleum industry. In production, crude oil, natural gasoline, benzol and alcohol blended with motor fuel have been considered. In consumption not only refined products, but crude consumed as fuel, refinery losses, ships' bunkers and blended fuels have been taken into account to obtain a true balance between supply and demand. Statistics from practically every country and territory have been studied, and where actual figures were not available,

*Presented before American Institute of Mining and Metallurgical Engineers, New York, February 20, 1935.

TABLE IV—WORLD CONSUMPTION OF PETROLEUM PRODUCTS AND RELATED FUELS
(Thousands of Barrels)

	1932						1933						1934					
	Motor Fuel	Kerosene	Gas and Fuel Oil	Lubricants	Miscellaneous	Total	Motor Fuel	Kerosene	Gas and Fuel Oil	Lubricants	Miscellaneous	Total	Motor Fuel	Kerosene	Gas and Fuel Oil	Lubricants	Miscellaneous	Total
United States	377,791	33,221	308,157	16,614	99,699	835,482	381,561	38,440	321,395	17,066	108,068	866,530	406,000	43,700	329,000	18,600	115,700	913,000
Russia	7,607	23,464	58,492	5,292	4,260	99,115	3,838	24,722	51,818	6,121	4,001	95,500	9,840	25,280	52,500	6,800	4,400	98,820
United Kingdom	30,328	5,283	19,280	2,462	1,810	59,163	33,220	5,480	21,900	2,937	2,430	65,967	34,500	6,260	25,700	3,020	3,170	72,650
France	19,571	1,584	8,828	1,768	1,814	33,565	21,268	1,522	12,594	2,019	1,156	38,559	21,400	1,810	12,720	2,100	1,360	39,390
Canada	14,435	1,558	13,153	746	2,060	31,952	15,016	1,608	13,520	757	1,912	32,813	16,200	1,700	14,200	800	1,600	34,500
Germany	12,789	960	3,996	2,015	1,620	21,380	12,373	841	6,429	2,001	1,893	23,537	14,200	860	7,500	2,200	1,700	26,460
Argentina	4,835	832	12,244	287	820	19,018	5,301	1,064	12,678	283	910	20,236	5,480	1,200	12,900	260	970	20,810
Japan	5,234	850	6,227	982	530	13,823	5,650	1,006	7,781	1,478	470	16,385	6,000	1,200	9,600	1,500	400	18,700
Mexico	1,724	567	9,920	109	2,413	14,633	1,765	583	11,091	121	2,175	15,735	1,880	600	11,280	140	2,400	16,300
Rumania	706	1,225	9,701	196	2,020	13,842	726	1,262	10,076	195	1,625	13,884	770	1,250	11,400	200	2,000	15,620
British India	2,389	6,916	3,668	770	1,036	14,779	2,085	5,899	3,382	877	920	13,163	2,150	6,000	3,500	950	930	13,530
Italy	2,915	1,102	5,323	801	229	10,370	3,001	1,133	7,296	642	240	12,312	3,240	1,200	7,800	640	250	13,130
Dutch East Indies	1,687	2,510	5,750	531	1,356	11,834	1,500	2,275	4,610	544	1,171	10,100	1,520	2,330	5,000	550	1,300	10,700
Australia	5,359	990	772	313	513	7,947	5,724	1,201	2,631	336	388	10,280	5,820	1,250	2,900	330	400	10,700
Dutch West Indies	156	19	5,200	22	2,820	8,217	160	21	5,100	24	2,795	8,100	170	30	5,700	30	3,100	9,030
China	675	3,674	1,530	194	85	6,158	744	4,460	2,184	264	93	7,745	900	3,900	2,500	250	100	7,650
Persia	461	1,200	3,200	670	1,230	6,761	673	1,285	3,259	660	1,410	7,287	700	1,200	3,300	700	1,600	7,500
Holland	2,891	1,346	1,376	352	202	6,167	3,291	1,464	1,992	427	137	7,311	3,280	1,460	1,770	390	330	7,230
Venezuela	474	25	4,866	42	350	5,757	507	17	4,922	28	380	5,854	590	20	5,200	30	500	6,340
Brasil	1,790	590	2,312	149	20	4,861	2,005	629	2,945	165	17	5,761	2,280	700	3,100	190	20	6,290
Sweden	2,921	612	1,602	321	60	5,516	2,930	719	2,003	294	116	6,062	3,090	725	1,920	310	135	6,180
Spain	3,122	165	1,728	210	280	5,505	3,032	215	1,502	174	360	5,283	3,290	200	1,630	190	350	5,660
Belgium	2,266	720	984	590	103	4,663	2,589	304	978	242	107	4,220	3,000	350	990	320	140	4,800
Denmark	1,980	639	1,605	181	14	4,419	1,840	680	1,630	182	8	4,340	2,160	630	1,580	195	15	4,580
Egypt	413	2,142	1,231	114	102	4,002	419	2,061	1,506	165	69	4,220	430	2,100	1,600	170	80	4,380
Cuba	699	173	2,784	52	40	3,748	504	114	2,840	41	38	3,537	490	120	3,000	40	30	3,680
Union of South Africa	1,901	415	404	130	147	2,997	2,149	451	560	154	147	3,461	2,200	460	700	160	150	3,670
Norway	847	277	1,335	69	48	2,576	895	264	2,090	92	60	3,401	980	270	2,060	90	50	3,450
Philippine Islands	759	560	1,824	74	102	3,319	891	590	1,790	102	90	3,463	860	580	1,800	70	80	3,390
Czechoslovakia	2,001	220	337	190	32	2,780	1,911	353	712	214	30	3,220	1,960	280	800	200	35	3,275
Switzerland	1,736	194	862	150	25	2,967	1,661	186	1,014	137	12	3,010	1,780	200	1,100	140	20	3,240
Hawaii Islands	905	106	1,449	45	72	2,577	909	129	1,624	44	59	2,765	920	130	1,800	50	60	2,960
New Zealand	1,669	159	968	62	41	2,899	1,590	120	780	72	71	2,633	1,680	110	950	70	80	2,890
Poland	643	944	328	357	452	2,724	780	943	401	308	378	2,810	750	920	380	310	360	2,720
Trinidad	110	61	2,690	31	236	3,128	122	63	2,030	30	210	2,455	120	70	2,200	30	280	2,700
British Malay	508	230	2,308	62	110	3,218	414	259	1,519	52	216	2,460	450	260	1,500	50	220	2,480
Chile	410	64	1,415	32	18	1,939	520	63	1,358	43	10	1,994	560	60	1,780	40	10	2,450
Uruguay	581	180	1,363	23	7	2,154	590	210	1,410	29	11	2,250	660	230	1,500	30	10	2,430
Panama Canal Zone	78	22	1,631	8	7	1,746	80	24	1,792	8	17	1,921	90	30	1,900	10	20	2,050
Iraq	141	153	530	33	156	1,013	185	182	832	39	210	1,448	310	200	1,200	60	240	2,010
Irish Free State	1,110	420	103	65	124	1,822	1,101	416	110	61	150	1,838	1,180	420	160	70	150	1,980
Austria	840	243	425	127	12	1,647	848	276	643	137	16	1,920	830	270	650	140	20	1,910
Algeria	930	364	187	81	70	1,632	1,138	377	244	107	86	1,952	1,000	370	350	100	80	1,900
Peru	342	328	590	31	165	1,456	428	461	509	32	190	1,620	440	480	520	40	230	1,710
Hungary	435	495	207	41	20	1,198	431	489	341	58	89	1,408	500	490	480	70	100	1,640
Greece	402	166	722	67	32	1,389	393	147	777	41	30	1,388	390	150	900	40	30	1,510
Porto Rico	391	59	943	23	16	1,432	449	65	806	22	20	1,362	460	70	850	20	30	1,430
Portugal	392	315	266	34	38	1,045	432	368	267	31	40	1,138	460	380	260	30	40	1,170
Finland	442	344	76	63	50	975	511	282	96	65	58	1,012	530	290	80	70	60	1,030
French Morocco	726	125	83	38	91	1,063	696	100	77	48	60	981	710	110	90	50	60	1,020
Others	5,092	4,211	14,530	891	710	25,434	5,142	4,367	15,114	984	985	26,592	5,300	4,500	15,600	1,000	1,000	27,400
	528,609	103,022	529,405	38,504	128,267	1,327,807	540,988	110,190	554,958	40,953	136,134	1,383,223	574,500	117,405	577,900	43,845	146,395	1,460,045

Outside of the United States, refinery losses, crude for fuel and consumption of by products not included under "Miscellaneous" is estimated at 20,600,000 barrels for 1932, 23,700,000 barrels for 1933, and 24,000,000 barrels for 1934, which figures should be added to the yearly totals shown in Table 4.

TOMORROW
may be the day

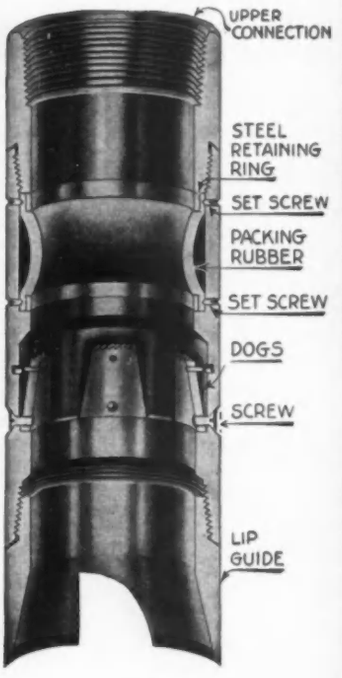
when the pipe gets stuck. It can mean days, weeks, months, of fishing . . . or even abandonment of the well and the investment that went into it.

OR

it can be a simple, quick job . . . if you have the

RIGHT FISHING TOOL ON THE DERRICK FLOOR.

to catch the pipe that is being run, before it becomes stuck and the job difficult.



The GRAY OVERSHOT

is a safe, simple, efficient foolproof tool that will positively perform that for which it is intended. Free from complications and tricky mechanisms that often do more harm than good.

POSITIVELY RELEASABLE

Have a GRAY OVERSHOT ready to run down right after the pipe twists off and pick up fish before it has time to get stuck.

GRAY TOOL COMPANY
Houston, Texas.

the estimates have been based on all the data available.

The figures in Table I indicate that during the last five years the world's production has exceeded demand every year and that the aggregate difference is some 207,150,000 barrels. It should be pointed out that the supply in the United States exceeded consumption by 111,401,000 barrels over the same five year period and

TABLE I

	World Production	World Consumption	Excess Production Over Consumption
1930	1,477,989	1,428,499	49,490
1931	1,432,142	1,417,374	14,768
1932	1,362,039	1,348,407	13,632
1933	1,467,128	1,406,923	60,205
1934	1,553,100	1,484,045	69,055
	7,292,398	7,085,248	207,150

that in 1931 and 1932 the demand exceeded supply while outside the United States the excess of output over demand was 95,749,000 barrels. Table II combines the excess production in the United States with its favorable balance of exports over imports, showing that the United States has reduced its storage over the five years by about 136,595,000 barrels while in Table

TABLE II

United States

	Excess Production Over Consumption	Excess Imports Over Exports	Total to Storage
1930	30,700	R 51,939	R 21,239
1931	R 5,815	R 38,788	R 44,603
1932	R 13,011	R 28,781	R 41,792
1933	67,427	R 60,254	7,173
1934	32,100	R 68,234	R 36,134
	111,401	R 247,996	R 136,595

III it is seen that, including its excess of imports from the United States, the rest of the world has added 343,745,000 barrels to storage during the period in question, the greatest accumulation coming in 1934. Table IV shows the world's consumption classified by countries according to the principal products.

These tables also indicate that at the end of 1934 the statistical position of the petroleum industry outside the United States was decidedly unstable, a situation

TABLE III

World Outside United States

	Excess Production Over Consumption	Excess Imports from U.S.A. Over Exports to U.S.A.	Total to Storage
1930	18,790	51,939	70,729
1931	20,583	38,788	59,371
1932	26,643	28,781	55,424
1933	R 7,222	60,254	53,032
1934	36,955	68,234	105,189
	95,749	247,996	343,745

which will probably become more acute as a result of the added Iraq production; and that the present favorable statistical position of the industry in the United States—which is partly due to the excess of exports over imports—may be to some extent jeopardized by the unstable situation in the foreign market.

All figures are in thousands of barrels, those of 1934 being estimated from statistics available in December.

Bonus Asked for Speedy Russian Drilling Crews

Maikop Oil Trust of U.S.S.R. has been requested by a Mr. Ordjokonidse to create a fund of 100,000 rubles to be paid out as speed bonuses to Russian drilling crews.

In this connection Russian newspapers recently made a great play of the fact that the American rate of drilling speed had been obtained in drilling well No. 144 at the Maikop oil field (Caucasus) last December. The last 974 meters of this 1260 meter well were penetrated in 30 days.

For comparison, the average drilling speed in the Maikop region in 1933 was 377 feet per month, while in 1934 it was 760 feet per month. Professor Goubkin, Soviet authority on oil, is responsible for the statement that such progress should be considered as very satisfactory inasmuch as the equipment used is old and worn.

Colombia Exports Total 16,477,172 Barrels in '34

Exports of crude oil by months for 1934 from Cartagena Bay (Mamonal), Colombia, South America, totaled 16,477,172 barrels with a valuation of $16,959,410, according to figures sent THE OIL WEEKLY by John Brandt of Cartagena. The following table shows the monthly export of that port:

Months	Net Barrels	Values (U. S. Cy.)
January	874,576	$ 910,901
February	897,062	923,398
March	551,333	536,050
April	1,481,975	1,429,830
May	1,878,507	1,874,184
June	1,354,713	1,445,116
July	1,639,606	1,721,432
August	1,650,202	1,736,685
September	1,557,014	1,561,121
October	1,709,074	1,806,322
November	1,355,439	1,389,586
December	1,527,671	1,624,785
Total	16,477,172	$16,959,410

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Text of Federal Control Bill

Proposed by Representative Disney

A bill to regulate commerce in petroleum, and for other purposes

Be it enacted, etc.—

DECLARATION OF POLICY

Section 1. Excessive supply injuriously affects commerce in petroleum among the several States and with foreign nations. Besides the results usually coincident with excessive supply and, in addition to distress sales and dumping, the effect here is to render unprofitable the operation of wells of small, but settled, production, and cause their abandonment before the maximum economic yield is obtained, thereby causing waste of an exhaustible natural resource essential to the national defense. Premature extraction of petroleum from the natural reservoir, induced by the absence of restrictions upon the quantity which may move in commerce, results also in other wastes and inferior uses. To remedy such evils and properly to regulate and coordinate commerce in petroleum among the several States and with foreign nations, it is essential that restrictions be placed upon the quantities which may move in commerce when excessive supply exists, and that fair and equitable apportionment be made among the States and among the different sources of supply. This commerce, a large portion of which is interstate or foreign, is found to be of such nature that any regulation herein contemplated, to be effective and fair, must regard all commerce in crude petroleum as a unit and establish quotas therein without regard to the fact that some transactions may occur within the States, since they affect, if they are not part of, commerce among the several States and with foreign nations.

Sec. 2. There is hereby created the Federal Petroleum Board, to be composed of five members. The Secretary of the Interior shall be a member and ex-officio chairman of the Board. The other four members shall be appointed by the President, for terms concurrent with the term for which the President is elected, and they shall hold office respectively until their successors are chosen and qualify. Each of the four shall receive compensation at the rate of $10,000 per annum. The Board shall appoint such qualified and trained employees as may be necessary in carrying out the purposes of this act, and their compensation shall be fixed in accordance with the Classification Act of 1923, as amended. The scientific and professional employees of the Board shall be selected solely upon the basis of what scientific or professional qualifications they possess. The Board from time to time shall elect a vice chairman to act in the absence of the chairman.

Sec. 3. The Board is authorized and empowered, when, in its judgment, it is necessary to effectuate the purposes of this act, to make investigations and collect data from the industry, and to this end it may require periodical and special reports from persons, firms, or corporations engaged, directly or indirectly, in the petroleum industry, and in transportation thereof, and may examine and inspect their books, records, papers, and properties for the purposes of verifying such reports and ascertaining the facts, and shall have power to compel the production of such books, records, and papers.

Sec. 4. The Board may cooperate with executives, officials, and agencies of the States in the study and investigation of matters relating to the petroleum industry, and may hold joint hearings upon such matters with any duly authorized State agency. The Board, when participating in any such joint hearing, shall have all the powers enumerated in section 13.

The several departments and bureaus of the United States Government shall, at the request of the Board, provide it with all records, papers, and information which they may have available pertaining to the petroleum industry.

Sec. 5. The Board shall limit the importation of petroleum and its products, including natural asphalt, to such quantities as will prevent imports of petroleum and its products, including natural asphalt, from interfering with the current domestic production by supplying an undue proportion of domestic consumptive and export demand for petroleum and its products, including natural asphalt.

The four quarters of the calendar year shall be reckoning periods. To the end of 1940, and thereafter until otherwise ordered by the Board, the allowed rate of imports of crude petroleum and the products of crude petroleum, all combined and including natural asphalt, in barrels total for any reckoning period of 3 calendar months, shall be 13.43 percent of the quantity of crude petroleum determined under section 6 to be the demand for consumption in the United States and the demand for export from the United States during the first month of such reckoning period. Crude petroleum or products thereof imported and supplied to vessels at American ports shall be deemed imports, excepting bunkers for vessels engaged in foreign trade.

In advance of each reckoning period the Board shall hold a hearing, consider applications for quotas, make fair and equitable allocations, and establish within the limits herein fixed just and reasonable quotas of crude petroleum and the various products thereof, including natural asphalt, for persons desiring to import the same during the period in proportion to their proven trade or manufacturing demand for such imports over and above their customary and available domestic supply, if any.

Quotas of particular products shall not be allowed to such extent as will, on the whole, increase the normal importation ratios of such products to the aggregate of crude and other products imported, except when the Board finds a shortage in the domestic supply of such particular products, and should the allowed ratio of crude petroleum, fuel oil, gas oil, paraffin, and asphalt in aggregate barrels to all other products of petroleum allowed to be imported fall below the average ratio which prevailed in the last 6 months of 1932, each barrel excess of such other products having a boiling point below 400° F., shall be deemed the equivalent of 3 barrels for the purpose of computing total allowable imports.

Under appropriate rules and regulations, the Board may permit imports in bond for export, including manufacture in bond coupled with export of resultant products, and such imports shall not be charged against import quotas or included in computations under section 6.

When quotas are in effect under this section it shall be unlawful for any person, except as otherwise herein provided, to import into the United States crude petroleum, or any product thereof, in excess of his quota or without having been assigned a quota under this section.

No tariff, duty, or excise tax now in force, shall be affected by the provisions of this act.

Sec. 6. The Board shall periodically, upon fair and impartial consideration of pertinent data, determine the demand for consumption in the United States and the demand for export (exclusive of exports from imports in bond) from the United States for petroleum in the United States and the products thereof. Using such determination the just and reasonable portion of such demand for crude petroleum from each producing State; and if found necessary by the Board for the purpose of carrying out the purpose and provisions of this act, the Board shall likewise determine the just and reasonable portion of such demand for crude petroleum from any or every pool, field, lease, property, storage unit, or other source of supply within the State.

Sec. 7. The consent of Congress is hereby given for any two or more petroleum-producing States to enter into agreements or compacts from time to time for the conservation of their petroleum resources and the restriction of crude-petroleum production, subject to the condition that the total allowed production for the signatory States combined shall coincide with the total demand for such production, as determined under section 6 hereof.

Sec. 8. Whenever and so long as the production of crude petroleum in any State, through agreement or compact, or through orders of State authorities, or otherwise, is kept within the demand for production from such State, as determined under section 6, no quotas shall be fixed under this act for pools, fields, leases, or properties within such State. In event two or more States shall be under agreement or compact restricting their production of crude petroleum, as authorized in section 7, the total production of the signatory States combined must exceed the total combined demand for such States, as determined under section 6, before quotas shall be prescribed for pools, fields, leases, or properties within any such State.

QUOTAS IN COMMERCE

Sec. 9. When, and only when, but as often as the production of crude petroleum in any State exceeds the demand therefor, as determined under section 6, but always subject to the provisions of sections 7 and 8, the Board shall prescribe quotas of crude petroleum for movement into commerce, in such manner and to such extent as will limit the total movements into commerce to the demand for consumption in the United States and the demand for export, as determined by the Board, and shall preseribe such quotas of crude petroleum from such States, pools, fields, leases, properties, storage units, or other sources of supply as it may find to be necessary to effect such national limitation. The quota prescribed for any such source of supply shall be equal to its just and reasonable portion of total demand as determined under section 6. It shall be unlawful for any person to place or receive in commerce (export, interstate, or intrastate), by sale, purchases, exchange, consignment, transportation, or otherwise, any crude petroleum in excess of quota so prescribed, or any product derived in whole or in part from such crude petroleum, with knowledge, or reasonable ground to believe, that the quota is being, or has been exceeded; and this inhibition shall include placing or receiving in such commerce any product of petroleum if the crude petroleum itself, being in excess of quota could not have been placed in such commerce lawfully and directly. If found necessary to accomplish the purposes of this act, the Board may require crude petroleum produced in excess of quotas in commerce to be stored and the storage sealed or bonded. In every case, exportation shall be deemed placement in commerce.

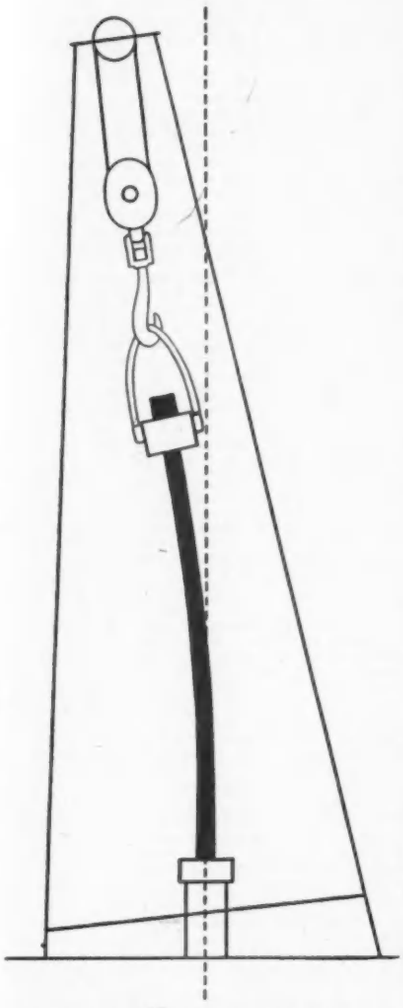
Sec. 10. To make effective the restrictions and quotas established under this act, the Board may prescribe and require certificates of clearance for crude petroleum in such areas and at such times as may be deemed necessary, under appropriate rules and regulations; and while such orders of the Board are in effect no person shall receive or transport crude petroleum to which such orders apply without appropriate certificates of clearance. Wherever such certificates are required by the Board, and any crude petroleum is refined or processed without first having moved in commerce under an appropriate certificate, it shall be unlawful to place any products thereof in commerce without furnishing a certificate of clearance, or for any person to receive or transport such products, knowing them to have been derived, in whole or in part, from crude petroleum which has not moved in commerce under an appropriate certificate of clearance, or for which a certificate of clearance for such products has not been furnished.

Sec. 11. In the administration, enforcement, and interpretation of this act, the Board is authorized and empowered to make such rules and regulations, in addition to those specifically provided for in this act, as may be reasonably necessary to carry out the purposes of this act. It may determine procedure for hearings including the manner of giving notice of such hearings, not inconsistent with the provisions of this act.

Sec. 12. Before quotas are prescribed pursuant to any section of this act, hearings shall be held after such reasonable public notice as may be prescribed by the Board (in no case less than 10 days); and at any such hearings any person or governmental body interested in the subject matter of the hearing shall be entitled to be heard: *Provided, however,* That in case an emergency is found to exist by the Board, temporary quotas for a period not exceeding 31 days may be prescribed by the Board without notice or hearing; but such temporary quotas shall thereafter be equitably adjusted at the earliest practicable date, and such adjustment shall be made after notice and hearing as herein provided: *And provided further,* That any orders or findings of State regulatory agencies relating to production or movement of petroleum may be adopted by the Board for the purpose of prescribing quotas pursuant to section 9 without the necessity of a hearing.

Sec. 13. The Board shall have, to the extent

"TUBING DRAG"



95% OF DERRICKS ARE OUT OF PLUMB, CAUSING TUBING DRAG

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reasonably necessary to carry out the purposes of this act, the power to examine witnesses, receive evidence, and administer oaths and affirmations; to take affidavits and depositions; and to require by subpena the attendance and testimony of witnesses and the production of specifically designed books, records, and papers. Such attendance of witnesses, and the production of such books, records, and papers may be required from any place in the United States at any designated place of hearing. In case of refusal to obey a subpena issued to any person the Board may invoke the aid of any district court of the United States, within the jurisdiction of which the person guilty of refusal to obey resides or carries on business, or is found, and such court may issue appropriate orders requiring such person to obey such subpena, and any failure to obey any such order of the court may be punished by such court as a contempt thereof.

The Board may order testimony to be taken by deposition, in any proceeding or investigation pending under this act, at any stage of such proceeding or investigation. Such deposition may be taken before any person designated by the Board and having power to administer oaths. Such testimony shall be reduced to writing by the person taking the deposition, or under his direction, and shall then be subscribed by the deponent. Any person may be compelled to appear and depose and to produce books, records, and papers in the same manner as witnesses may be compelled to appear and testify and produce books, records, and papers before the Board, as hereinbefore provided.

Witnesses shall be paid the same fees and mileage that are paid in the courts of the United States, and witnesses' whole depositions are taken and the persons taking the same shall severally be entitled to the same fees as are paid for like services in the courts of the United States.

Sec. 14. Any person, adversely affected by any order, rule, or regulation issued or promulgated under the provisions of this act, or by any act done or threatened thereunder, and who has exhausted his administrative remedies hereunder, or as may be provided hereunder, and who has presented to the Board a petition for relief which has not been granted, may seek court review by a suit for injunction in an appropriate district court of the United States. Such suit shall be tried in accordance with general equity principles; *Provided, however,* That no temporary, permanent, or other injunction, restraining order, or writ shall issue in such suit unless the case shall have been fully heard and determined by a court constituted of three judges, in the same manner as provided in section 380 of title 28 of the United States Code. And courts so constituted shall have power to grant relief in such cases. Their decisions may be reviewed as provided by law and rules of the court.

The provisions of this section for court review of decisions, orders, rules and regulations of the Board, and action taken or threatened thereunder, shall be exclusive.

Sec. 15. If any person fails or neglects to obey any order, rule, or regulation of the Board while the same is in effect, the Board or the United States by its Attorney General may apply to an appropriate district court of the United States for the enforcement of such order, rule, or regulation. The court shall enforce obedience to such order, rule, or regulation by a writ of injunction or other proper process, mandatory or otherwise. The court may also require any person who has moved in commerce petroleum or the products thereof in excess of the applicable quota prescribed pursuant to the terms of this act to reduce his future movements in commerce to an amount below such quota so as to make up for the amount of such excess.

Sec. 16. Any person who shall violate any provision of this act, or any order, rule, or regulation issued or promulgated pursuant to this act, shall be guilty of an effense, and upon conviction shall be punished by a fine not to exceed $1000 or by imprisonment for not longer than 1 year, or by both such fine and imprisonment, and each day such violation continues shall be deemed a separate offense. Any person who shall import into the United States any petroleum or its products in violation of any order issued pursuant to section 5, or who shall place, receive, or transport in commerce crude petroleum or the products thereof in violation of any order issued pursuant to section 9, shall also forfeit to the United States a sum equal to the value of such petroleum or product so imported or placed, received, or transported in commerce, which forfeiture shall be payable into the Treasury of the United States, and shall be recoverable in a civil suit in the name of the United States and brought in the district where the offense was committeed, or in any district where such person may be found. The costs and expenses of such prosecutions shall be paid out of the appropriation for the expenses of the courts of the United States.

Any person who shall neglect or refuse to attend and testify, or to answer any lawful inquiry, or to produce any books, records, or other papers, if in his power to do so, in obedience to the subpena or lawful requirement of the Board, shall be guilty of an offense, and upon conviction thereof in a court of competent jurisdiction shall be punished by a fine of not more than $1000 or by imprisonment for not more than 1 year, or by both such fine and imprisonment.

Any person who, for the purpose of evading this act, shall intentionally make, or cause to be made, any false entry or statement of fact in any report required to be made under this act, or who, for such purpose, shall so make, or cause to be made, full, true, and correct entries in such accounts, records, or memoranda of all facts and transactions pertaining to the interest or activities in the petroleum industry of such person as may be required by the Board, under authority given herein, or who, for such purpose, shall remove out of the jurisdiction of the United States, or mutilate, alter, or by any other means falsify any books, records, or other papers pertaining to the transactions regulated by this act, shall be deemed guilty of an offense against the United States, and shall be subject upon conviction in any court of competent jurisdiction to a fine of not more than $5000, or to imprisonment for a term of not more than 3 years, or to both such fine and imprisonment.

Sec. 17. If and when, no applicable quota in commerce is in effect under section 9 for a lease or property, and if and when a production quota or restriction upon production is in effect under State authority applicable to such lease or property, neither crude petroleum produced therefrom in excess of the State allowable, nor products derived, in whole or in part, from such excess production shall be placed, received, or transported in interstate commerce or exported until a permit is obtained from the Board; and any person placing, receiving, or transporting the same in such commerce or exportation shall be subject to the penalties of section 16 relating to placement, receipt, and transportation in commerce, when quotas under section 9 are exceeded. No permit under this section shall be granted by the Board, until the operator of the lease or property makes proof that production therefrom has been adjusted to conform to the rules and orders of the State authority, all periods considered, and that the applicant has in all respects complied with the provisions of this act. The inhibitions and penalties of this section shall apply also to placing, receiving, or transporting in intrastate commerce crude petroleum produced in excess of State allowables, or products derived therefrom in whole or in part, such transactions being here found to affect commerce among the States and with foreign nations.

Sec. 18. This act shall not be construed to repeal such portions of the Code of Fair Competition for the Petroleum Industry, adopted pursuant to the National Industrial Recovery Act, as are not necessarily inconsistent herewith.

Sec. 19. Any offense committeed, or any right accrued, or any penalty or obligation incurred prior to the effect date of this act under any provision of law or code of fair competition repealed by this act, may be prosecuted or enforced in the same manner and with the same effect as if this act had not been passed.

Sec. 20. If any provision of this act or any clause, sentence, or part hereof be held unconstitutional or invalid for any reason or the applicability thereof to any person, circumstance, commodity, or class of transactions with respect to any commodity be held invalid, the validity of the remainder of the act and the applicability of such provisions to other persons, circumstances, commodities, and classes of transactions shall not be affected thereby.

Sec. 21. The words defined in this section shall have the following meaning when found in thic act, to-wit:

(a) "Petroleum Industry" means the producing, selling, shipping, processing, refining, transporting, or otherwise dealing in petroleum or the products thereof, including natural gasoline and natural gas produced in conjunction with petroleum.

(b) "State" means the District of Columbia and any State, Territory, or possession of the United States.

(c) "Person" means any natural person, corporation, association, partnership, executor, administrator, receiver, or trustee.

SHORT TITLE

Sec. 22. This act may be cited as the "Federal Petroleum Act."

MARKETS and STATISTICS

Better Refined Prices Posted Due to Hot Oil Volume Decline

HE improvement shown in the East Texas refined market situation the previous week gained headway the past seven days and prices on all grades of gasoline were advanced one eighth cent per gallon. With this assistance gasoline prices throughout the Mid-Continent were raised one eighth cent per gallon on all grades. The increase in posted refined prices in East Texas were due to a decline in the hot oil volume. Conditions in California showed improvement, too, with a scarcity of crude forcing the tank wagon price to advance.

The total tank car shipments from the East Texas field slumped considerably during the week. Most of the decline was in gasoline and topped crude movements. Tightening up of transportation leaks by the Railroad Commission and the attorney general's department, plus dismissal and expiration of court injunctions that have permitted rather heavy shipments by a few refiners, materially decreased the volume getting out to distant markets. Records of shipments indicate that the current supply of hot oil is backing up in the district in the form of crude, semi-refined oils and finished products. The general feeling is that, while there has been improvement, the state enforcement agencies will never completely control overproduction and that they will be continually harrassed with legal obstacles. Consequently, the industry is looking forward to enactment of the Connally control bill that will reestablish the federal tender board. Estimates on the volume of hot oil varied from 40,000 to 50,000 barrels, with 45,000 the most generally accepted figure.

Prices Up

Gasoline prices at refineries now are back on a level with those existing the third week in January. Quotations on East Texas gasoline eligible for tenders and movement are as follows: below 62 octane 3½ cents, up one eighth cent per gallon; 62-67 octane, four cents; and 68-70 octane, 4½ cents.

Prices in both North Texas and Group 3 areas advanced with better postings in East Texas. Prices in North Texas territory are as follows: below 62 octane, 3⅜ cents; 62-67 octane, 4⅛ cents; and 68-70, 4⅝ cents. The same prices existed in Group 3 (Oklahoma) as in North Texas.

California markets, which have been slumping during the past two weeks, showed improvement the latter part of the week, due largely to the growing scarcity of spot crude oil and natural gasoline.

East Texas Hot Oil Shipments Down

Tyler.—Movement of refined and semi-refined oil products from the East Texas field in tank cars was limited to 1282 cars during the past week, representing a decline of 710 cars as compared to the previous week, or less than 50 percent of the traffic reported two weeks ago. The high mark for the year was reached during the week ending February 3 when a series of court injunctions made it possible for shipments to jump to 2592 cars. Downward trend of shipments via tank cars has been brought about by the energetic efforts of the legal staff of the attorney general and the personnel of the railroad commission in enlisting the aid of state courts to hold violators in line.

During the week ending February 17 rail shipments involved an aggregate of 11,140,251 gallons, or 1282 cars, of miscellaneous products, with only 390 cars lacking approved tenders of the state tender board. A total of 1036 cars without tenders, but protected by court injunctions, were dispatched from the field the previous week.

The hot oil situation in the field has not been relieved as much as the slump in rail movement would indicate, as illegal production estimates for the week ending February 18 were placed at 40,000 barrels daily. Refineries were credited with processing an average of 66,600 barrels daily, including a limited quantity of re-run material. This condition is resulting in the rapid accumulation of crude, refined and semi-refined products that can not qualify for approved tenders, but those storing such products are anticipating another break in proration control, as has occurred repeatedly in the past, to eventually market same without punishment.

During the past week tank truck shipments of gasoline, with a small volume of kerosene and fuel oil, was estimated at 1,690,000 gallons.

East Texas Tank Car Shipments

Week Ending February 17, 1935

Products—	No. Cars	Estimated Gallons
Gasoline	521	4,221,553
Fuel Oil	315	3,063,823
Residuum	156	1,431,942
Casinghead Gasoline	135	1,163,462
Kerosene	73	581,948
Gas Oil	34	277,779
Distillate	32	259,404
Topped Crude	16	140,340
Total	1,282	11,140,251
Total Prev. Week	1,992	17,345,563
Coastwise	626	
Intrastate	334	
Interstate	322	
Total	1,282	
Tendered	892	
Untendered (Ct. Injunctions)	390	
Total	1,282	

Crude Scarcity Helps California Market

THE growing scarcity of spot crude oil and natural gasoline on the market in California is a big help to stabilize the gasoline market in Southern California and the small number of small plants not working with the Agency have been forced to increase their tank wagon price. The concerns are now selling at 12 to 12.25 cents, tax paid, to their retail outlets, thus forcing the stations to boost their retail prices. Only three small refineries are now selling at lower prices.

Members of the Retail Petroleum Dealers Association made an effort to boost their retail price from 14 to 14.5 cents to 15 cents in Southern Califor-

nia, but with little success, due to competition of the bootleg stations. Most of the stations reverted back to old prices.

The outlook for a stabilized market has shown improvement, the filing of suits by the government being a big help. Two such suits were filed and two more similar suits are ready for filing. The companies proceeded against were the source of much of the free spot crude on the market, and the removal of this overproduced crude from the market brought about a scarcity of cheap gasoline.

Tanker movement of crude and petroleum products from California in January came close to equalling the movement the same month last year regardless of the decline in shipments of fuel oil to East Coast. The fuel oil market in California for export is firm at 70 to 75 cents, but since tanker rates are up, it is impossible to ship fuel oil to New York and compete with prevailing prices in that territory.

Cargo gasoline can be bought at 4.5 to 4.75 cents for 65 octane, but higher grades are quoted at 5 to 5.5 cents at the harbor. The best grade of kerosene is quoted at 5 cents, but is scarce.

Crude production in California has been running rather high in February but is expected to show a healthy decline during the last 10 days of the month.

Effect of the government suits was felt during the week, ending February 16, especially in one field in Kern County. Real effect should be felt the last half of the month.

Commission Files Two Overproduction Suits

Austin, Texas.—Attorney General Wm. McCraw has filed suit against Shoreline Refining Company and Swastika Refining Company, and obtained temporary injunctions in the 98th District Court forbidding them from violation of Railroad Commission orders.

In the petitions filed the state has alleged that during 1934 each plant received certain excess crude; that they refused to file refinery reports as required; that products derived from excess crude were transported; that commission agents were denied access to their properties.

Penalties of $1000 per day were asked by the state for each day the plants failed to comply with orders carrying these requirements. The penalty is sought for each type of violation on each day, and because of the extended period of alleged violation, penalties would total several hundred thousand dollars.

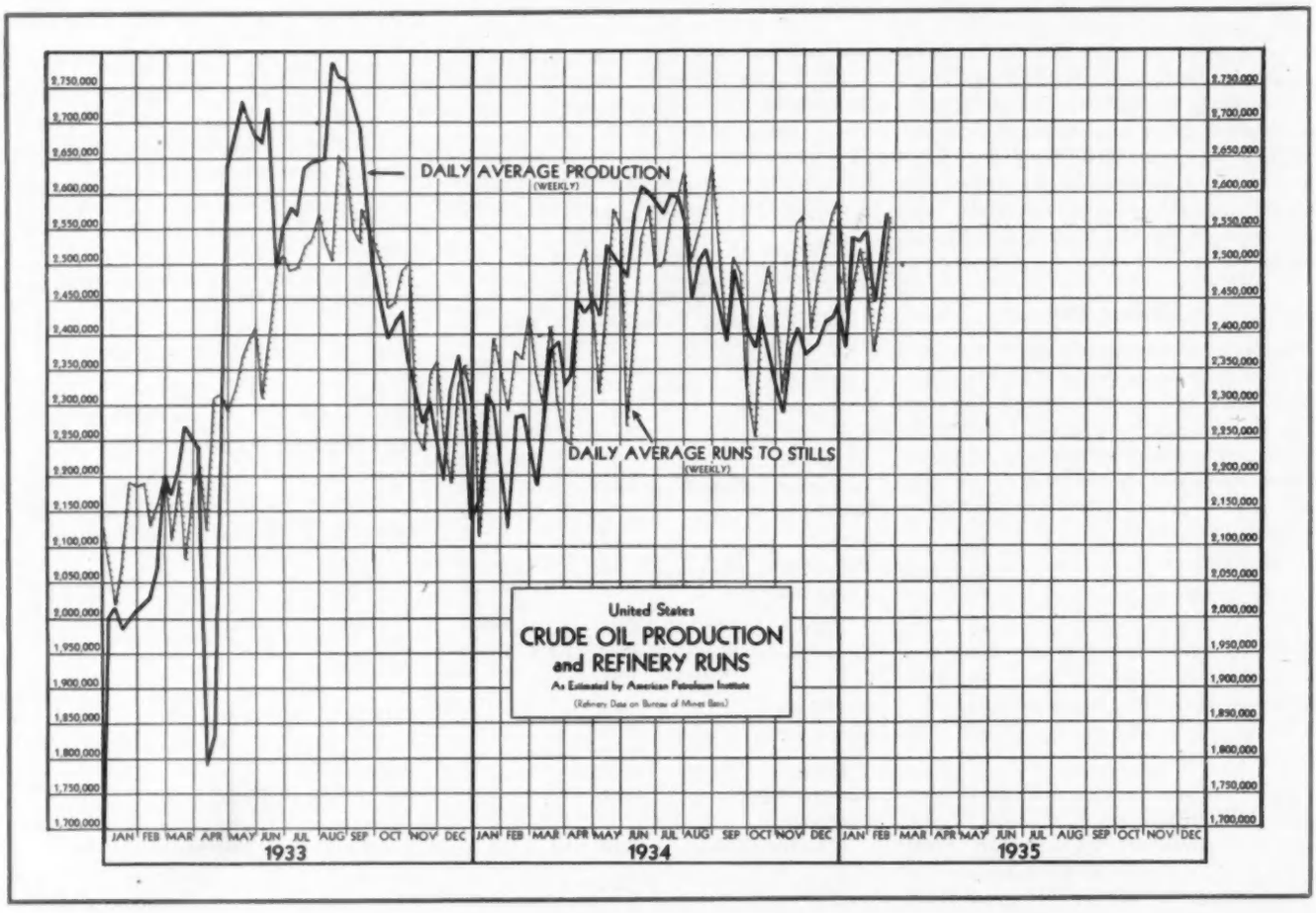
Burt Wrather, Rex Stegall and L. S. Fite are named defendants in the suit affecting the Swastika plant. L. S. Fite is also named defendant in the Shoreline suit.

The petition filed by Assistant Attorneys General L. H. Engelking and Merton Harris, ask for receivership of the properties if a permanent injunction is issued on final hearing.

New Court

Austin, Texas.—A new district court for Montgomery County, where the Conroe field is located, would be created by a bill introduced in the House of Representatives last week by Representative Colson.

Increased litigation caused by the development of the oil field is one of the principal reasons for which the court would be added.



March Federal Oil Allowable Reduced

Washington, D. C.—Permissible crude production during March, as anticipated, is reduced by 5800 barrels a day, under orders issued this week by Oil Administrator Harold L. Ickes. Allowable daily production for the month is set at 2,520,300 barrels against 2,526,100 barrels for February.

The March quotas were reached by juggling the allowables of most of the states, only three retaining their February figures. Increases aggregating 13,300 barrels were given to seven states and reductions aggregating 19,100 barrels ordered in eight states.

The heaviest changes were reduction of the Texas quota by 11,600 barrels and increase of the Pennsylvania quota by 4300 barrels.

	March	Feb.	— = decrease + = increase
Arkansas	31,900	32,000	—100
California	492,600	488,600	+4,000
Colorado	3,500	3,500	.....
Illinois	11,200	11,700	—500
Indiana	2,200	2,200	.....
Kansas	139,700	138,600	+1,100
Kentucky	14,700	14,800	—100
Louisiana	110,500	109,500	+1,000
Michigan	31,600	30,000	+1,600
Montana	9,500	9,500	.....
New Mexico	49,300	49,400	—100
New York	11,300	10,300	+1,000
Ohio	11,500	11,700	—200
Oklahoma	491,000	497,100	—6,100
Pennsylvania	43,300	39,000	+4,300
Texas	1,020,100	1,031,700	—11,600
West Va.	11,300	11,000	+300
Wyoming	35,100	35,500	—400

Public Utility Trend Being Watched Closely

Washington, D. C.—Legislation now pending in Congress which would declare coal a public utility is being watched with interest by officials of the oil administration and its enactment and favorable reception by the country might be followed by an effort to put oil in the same category.

A belief that oil should be declared a public utility is held by Oil Administrator Harold L. Ickes, who yesterday cited the advantages which would accrue as including greater conservation, more scientific production methods, reduction of waste in refining, and less wasteful distribution.

"If it is going to be declared a public utility," he commented, "there is no reason why it should be deferred."

However, the administrator says, he does not contemplate recommending that Congress enact such legislation at the present time.

The question of oil as a public utility has been discussed by Administrator Ickes with President Roosevelt, it was revealed, the administrator's idea being to deal with the oil question from the "long view" of the future, when our resources begin to dwindle. With this is mind, the possibility of higher costs to the consumers of oil products is dismissed with the suggestion that without control much heavier costs may be imposed in years to come.

Production of Crude Oil Trends Lower During Week

PRODUCTION of crude oil in the United States during the past week turned slightly downward, averaging 2,540,325 barrels daily, exclusive of oil surreptitiously produced. This was 21,325 barrels daily less than the 2,561,650-barrel daily production regularly reported during the previous week. Production is still above the 2,526,100-barrel daily allowable set by the federal agency for February.

California reported the sharpest production during the past week, with the daily average production of 492,500 barrels, being 23,800 barrels below the daily average for the previous week. All of the major fields in the state except Kettleman Hills showed decreases. California production is now in line with the federal agency allowable effective February 1.

Oklahoma showed a decrease of 8950 barrels daily, with the Oklahoma City field holding steady at 159,125 barrels. Seminole dropped by 3000 barrels daily to an average of 123,650 barrels.

Kansas increased sharply to an average daily production of 146,750 barrels. Miscellaneous fields accounted for the bulk of the increase.

Oil surreptitiously produced averaged 45,000 barrels daily during the past week, bringing the United States grand total up to 2,585,325 barrels daily.

Proration Tax Held Invalid on Osage Oil

Oklahoma City.—The Oklahoma Supreme Court, by a vote of five to four, granted an injunction to Barnsdall Refineries, Inc., and 17 other oil companies with interests in Osage County, Oklahoma, to prevent the state tax commission and the sheriff of Osage County from collecting a one eighth cent per barrel proration tax on oil produced in that county. This tax was enacted into law along with House Bill No. 481, the conservation act passed by the fourteenth legislature. The majority opinion held the act passed by Congress in 1921 which permitted the state to levy a gross production tax on oil produced in the state does not permit the additional excise tax of one eighth cent per barrel, the revenue from which is used to defray expenses of the proration department. The dissenting opinion held that the congressional act specified no maximum nor minimum tax and declared the intention of Congress was to permit the state to levy against oil produced from Indian leases in Osage County the same tax levied against oil produced elsewhere in the state. The one eighth cent per barrel tax yielded a revenue of $215,756.73 during the fiscal year ended June 30, 1934.

United States Crude Oil Production

Estimates Compiled by The Oil Weekly

District or State	Barrels Daily for Week Ending Feb. 23	Feb. 16
TEXAS—		
Texas Panhandle	60,000	59,500
North Texas	58,100	58,000
West Central Texas	27,900	28,000
West Texas	148,000	152,000
East Central Texas	52,000	52,500
East Texas Field	*436,000	*434,000
South Texas	58,800	59,000
Texas Gulf Coast	176,200	176,000
Total Texas	1,017,000	1,019,000
OKLAHOMA—		
Oklahoma City	159,125	159,325
Seminole Area	123,650	126,650
Tatums	5,000	5,000
Lucien	9,100	9,050
Fitts	10,750	11,825
Others	191,400	195,925
Total Oklahoma	499,025	507,975
KANSAS—		
Ritz-Canton	10,600	10,350
Voshell	6,375	5,800
Nikkel-Hollow	12,670	11,275
Sedgwick	10,600	10,250
Burrton-Haury	21,650	20,175
Others	84,855	81,150
Total Kansas	146,750	139,000
LOUISIANA—		
North Louisiana	22,750	22,500
Louisiana Gulf Coast	93,000	91,000
Total Louisiana	115,750	113,500
ARKANSAS	31,100	31,175
CALIFORNIA—		
Long Beach	66,500	68,000
Santa Fe Springs	37,500	39,000
Huntington Beach	39,000	42,500
Dominguez	19,000	20,000
Inglewood	9,000	11,000
Ventura Avenue	22,500	22,500
Seal Beach	7,500	7,500
Midway-Sunset	53,000	57,500
Elwood	10,000	10,500
Kettleman Hills	68,000	65,000
Mountain View	11,000	14,500
Playa del Rey	7,500	9,700
Others	142,000	148,600
Total California	492,500	516,300
MOUNTAIN STATES—		
Wyoming	34,000	35,000
Montana	11,000	11,400
Colorado	4,000	3,800
Total Rocky Mountain States	49,000	50,200
NEW MEXICO	48,200	48,000
EASTERN STATES	104,000	101,500
MICHIGAN	37,000	35,000
Total United States	*2,540,325	*2,561,650
*Surreptitiously produced oil in East Texas not included in above figures, estimated at	45,000	55,000
Grand total, including surreptitious production	2,585,325	2,616,650

Crude Runs to Stills; Finished and Unfinished Gasoline; Gas and Fuel Oil Stocks; and Cracked Gasoline Production, Week Ended February 16, 1935

(Figures in thousands of barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		Stocks of Finished Gasoline			(a) Stocks of Unfinished Gasoline	(b) Stocks of Other Motor Fuel	Stocks of Gas and Fuel Oil	Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Bulk Term., in Trans. & Pipe Lines	Total at Refys., Term., etc.				Potential Rate	Reporting		Daily Average
		Total	%										Total	%	
East Coast	582	582	100.0	478	82.1	6,093	9,276	15,369	831	210	10,257	496	471	95.0	75
Appalachian	150	140	93.3	103	73.6	1,157	966	2,123	292	70	1,004	69	69	100.0	23
Ind., Ill., Ky	446	422	94.6	304	72.0	5,147	4,030	9,177	656	65	4,262	325	309	95.1	98
Okla., Kans., Mo	461	386	83.7	248	64.2	3,199	1,935	5,134	767	415	3,914	256	238	93.0	58
Inland Texas	351	167	47.6	97	58.1	1,299	95	1,394	205	445	1,824	82	66	80.5	24
Texas Gulf	601	587	97.7	559	95.2	5,618	231	5,849	1,324	115	9,131	358	355	99.2	101
Louisiana Gulf	168	162	96.4	113	69.8	924	623	1,547	249	.....	4,036	71	71	100.0	23
North La.,—Ark.	92	77	83.7	37	48.1	184	83	267	53	50	448	41	38	92.7	7
Rocky Mountain	96	64	66.7	40	62.5	853	.....	853	116	50	709	46	42	91.3	11
California	848	822	96.9	461	56.1	8,637	2,066	10,703	936	2,600	65,310	209	209	100.0	63
TOTALS WEEK: February 16, 1935	3,795	3,409	89.8	2,440	71.6	33,111	19,305	52,416	5,429	4,020	100,886	1,953	1,868	95.6	483
February 9, 1935	3,795	3,409	89.8	2,275	66.7	(*)32,042	18,798	50,840	5,273	4,050	*100,754	1,953	1,868	95.6	469

Below are set out estimates of Crude Runs and Cracked Gasoline Production on B. of M. Basis for Week Feb. 16, 1935, compared with Feb. 1934 Bureau figures

Estimate B. of M. Basis February 16, 1935	2,565		530
Estimate B. of M. Basis February 9, 1935	2,450		520
U. S. B. of M. February 1934: Daily Average Crude Runs	2,374	U. S. B. of M. February 1934: Daily Average Cracked Prod.	457

(a)Amount of Unfinished Gasoline contained in Naphtha Distillates.
(b)Estimated. Includes Unblended Natural Gasoline at Refineries and Plants; also Blended Motor Fuel at plants.
(*)On new basis; the change affecting Texas Gulf Coast

Passage of Legislation Is Urged By Allred to Stop Gas Wasteage

(*Continued from page 14*)

nation of physical waste thereof within such reasonable limitations as may be found necessary to protect the program of oil production.

"Second: An adequate provision to provide for ratable withdrawal of gas from gas wells in the fields.

"Third: Proper limitations upon the right to produce natural gas from gas wells so as to compel producers, handlers and transporters of natural gas to apportion withdrawals from all gas wells in each field ratably under the supervision of the railroad commission.

"Fourth: Adequate power and latitude of fact finding and regulatory rules should be given to the railroad commission to properly supervise the restriction of production of natural gas in the gas fields, to prevent waste thereof, and to restrict the right to produce natural gas so as to impose ratable withdrawal of gas from the wells in each field.

"Fifth: It is my opinion and I respectfully submit that the statute should be so drawn as not to award a preferred position to those few giant carriers who virtually hold a monopoly upon the markets for light and fuel. Instead I recommend that no limitation be put upon the uses of natural gas beyond beneficial use.

"Some proper uses may be of small economic value. But their recognition under the law is indispensable to competitive industry that insures the best effect for the benefit of land and well owners in the matter of market price realized.

"Sixth: The divorcement of pipe lines from the producing, manufacturing and marketing branches of the natural gas industry is essential to the remedy.

"I believe it is essential, and I therefore recommend, that appropriate legislation be enacted to limit the scope of business ownership of corporations in this industry as the proper means to effectuate gas conservation regulation. To insure effectiveness of this regulation, it will be necessary to include a prohibition against interlocking ownership of units in these several branches of the industry by holding companies.

Houston.—C. & C. Drilling Company abandoned Granbury & Smith 1, Wm. Shadburn 1, Polk County, at 4545 feet after topping the Vicksburg at 3160 feet and the Massilina Pratti at 3701 feet.

Introduce Natural Gas Tax Bill

Austin, Texas.—A bill placing a graduated tax on natural gas was introduced in the Texas Legislature Friday by Representative Cecil Lotief of Cross Plains. Based on the value of the gas and the amounts produced each quarter of the year, the following rates would be established: two percent on the first 250,000,000 feet; three percent on production from that figure to half a billion; four percent on half to a billion feet; five percent on one to two billion feet; six percent on all produced in excess of two billion feet.

Comparison of Permits Granted For New Wells

State	Week Ending Feb. 16	Total this month	Total this year	Total this date last year	1934 year total
Arkansas	3	11	27	9	100
California	20	55	98	59	629
Louisiana	15	49	98	122	799
Kansas	28	89	202	101	1,015
Michigan	9	17	53	59	460
Oklahoma	58	122	278	239	2,045
Texas	131	542	1,622	1,037	10,550
Total	264	885	2,378	1,626	15,598

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to February 22, 1935)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$ .84	2¢	40—$1.08	9-29-33
N. and N.-C. Texas	28— .79	2¢	40— 1.03	9-29-33
Texas Panhandle				
Gray County	34— .79	2¢	40— .91	9-29-33
Carson-Hutchinson	34— .69	2¢	40— .81	9-29-33
West Texas				
Ector, Pecos, Wk'lr	*.75			9-29-33
Crane, Upton, Howard and Glasscock	*.70			9-29-33
East Texas	*1.00			9-29-33
Texas Gulf Coast				
Conroe	35— 1.09	2¢	40— 1.19	9-29-33
Tomball	*1.15			9-29-33
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 20— .82	2¢	34— 1.12	9-29-33
South and S.W. Texas	Below			
Refugio (Light)	20— .82	2¢	34— 1.12	9-29-33
Refugio (Heavy)	*.85			9-29-33
Saxet	*.85			9-29-33
Mirando	*.80			9-29-33
Pettus	*1.05			9-29-33
Salt Flat	*.87			9-29-33
Darst Creek	*.87			9-29-33
Arkansas				
El Dorado (Light) and Rainbow	29— .79	2¢	40— 1.03	3-17-34
El Dorado East Field and Smackover	*.70			9-29-33
North Louisiana	29— .79	2¢	40— 1.08	9-29-33
Urania	*.85-*.87			1- 1-34
South Louisiana	Below			
Lockport	20— .80	2¢	34— 1.10	9-29-33
Iowa, Cameron Mds	Below 20— .70	2¢	34— 1.00	9-29-33
Rocky Mountain States				
Salt Creek	29— .84	2¢	40— 1.08	9-29-33
Elk Basin	*1.17			9-29-33

*All gravities—flat rate.
†Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Grass Creek (Light)	*$1.17			9-29-33
Big Muddy	*1.01			9-29-33
Rock Creek	*1.02			9-29-33
Sunburst	*1.35			9-29-33
Lance Creek	*1.02			8-25-33
Osage	*.62			8-25-33
Cat Creek	*.45			8-25-33
Pondera	*.65			8-25-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	*.75			9-29-33
Mid-West States				
Lima	*1.30			9-29-33
Illinois	*1.13			1- 5-34
Princeton	*1.13			1- 5-34
Western Kentucky	*1.08			5-26-34
California				
Signal Hill	14— .65	1¢	16— .66	9- 6-33
	17— .69	2¢	22— .84	9- 6-33
	23— .88	3¢	30— 1.09	9- 6-33
Seal B., Alamitos Hts.	19— .65	3¢	20— .68	9- 6-33
	21— .72	4¢	22— .76	9- 6-33
	23— .81	4¢	26— .93	9- 6-33
	27— .98	4¢	30— 1.10	9- 6-33
Huntington Beach	14— .65	4¢	15— .69	9- 6-33
	16— .72	3¢	19— .81	9- 6-33
	20— .83	3¢	28— 1.07	9- 6-33
	29— 1.09	3¢	30— 1.12	9- 6-33
Inglewood	14— .65	4¢	16— .73	9- 6-33
	17— .76	4¢	18— .80	9- 6-33
	19— .83	4¢	20— .87	9- 6-33
	21— .90	4¢	22— .94	9- 6-33
	23— .97	4¢	24— 1.01	9- 6-33
Playa del Rey	14— .65	1¢	15— .66	9- 6-33
	16— .69	4¢	17— .73	9- 6-33
	18— .76	4¢	19— .80	9- 6-33
	20— .83	4¢	21— .87	9- 6-33
	22— .90	4¢	23— .94	9- 6-33
	24— .97	3¢	25— 1.00	9- 6-33
			26— 1.04	9- 6-33
Olinda-Brea Canyon	14— .65	4¢	16— .73	9- 6-33
	17— .76	3¢	28— 1.10	9- 6-33
Athens-Rosecrans Domingues	23— .83	3¢	24— .86	9-1-33
	25— .90	4¢	26— .94	9- 6-33
	27— .97	3¢	29— 1.04	9- 6-33
	30— 1.08	4¢	31— 1.12	9- 6-33
			32— 1.15	9- 6-33
Elwood (fob ship)	33— 1.03	3¢	37— 1.15	9- 6-33
Torrance	14— .65	1¢	15— .66	9- 6-33
	16— .69	3¢	20— .81	9- 6-33
	21— .83	3¢	26— .98	9- 6-33

*All gravities—flat rate.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Richfield	15—$ .65	2¢	16—$ .67	9- 6-33
	17— .70	4¢	20— .82	9- 6-33
	21— .85	4¢	22— .89	9- 6-33
	23— .93	4¢	24— .97	9- 6-33
	25— 1.00	4¢	27— 1.08	9- 6-33
	28— 1.11	4¢	29— 1.15	9- 6-33
Whittier-LaHabra	15— .65	3¢	18— .74	9- 6-33
	19— .78	3¢	24— .93	9- 6-33
Montebello	19— .65	1¢	20— .66	9- 6-33
	21— .69	3¢	22— .72	9- 6-33
	23— .76	4¢	24— .80	9- 6-33
	25— .85	4¢	26— .89	9- 6-33
Coyote Hills	16— .65	3¢	19— .74	9- 6-33
	20— .78	3¢	29— 1.05	9- 6-33
	30— 1.09	3¢	34— 1.21	9- 6-33
Santa Fe Springs	21— .72	4¢	22— .76	9- 6-33
	23— .79	4¢	25— .87	9- 6-33
	26— .90	4¢	28— .98	9- 6-33
	29— 1.01	4¢	30— 1.05	9- 6-33
	31— 1.08	4¢	33— 1.16	9- 6-33
	34— 1.19	4¢	35— 1.23	9- 6-33
	36— 1.26	4¢	38— 1.34	9- 6-33
New Hall, McKittrick, Kern River	14— .57		19— .57	9- 6-33
Midway-Sunset, Elk Hills, Buena Vista Hills	17— .57	4¢	18— .61	9- 6-33
	19— .64	3¢	22— .73	9- 6-33
	23— .77	4¢	33— 1.17	9- 6-33
Lost Hills	17— .57	4¢	21— .73	9- 6-33
	22— .76	3¢	30— 1.00	9- 6-33
Coalinga	17— .57	1¢	18— .58	9- 6-33
	19— .62	3¢	21— .68	9- 6-33
	22— .72	3¢	25— .81	9- 6-33
Wheeler Ridge	17— .57	1¢	18— .58	9- 6-33
	19— .61	3¢	25— .79	9- 6-33
Kettleman Hills	33— .93	3¢	39— 1.11	9- 3-33
Pennsylvania				
Bradford	*2.20			1- 4-35
Sw Pa. Pipe Line	*2.02			2- 4-35
Eureka Pipe Line	*1.97			2- 4-35
Buckeye Pipe Line	*1.87			2- 4-35
Corning Grade	*1.32			10- 2-33
Michigan				
Central Michigan	*1.20			9-30-33
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

*All gravities—flat rate.

Summary of Wells Completed in the United States Week Ending February 23, 1935

	Completions	Oil wells	Gas wells	Failures	Initial production	Total Completions 1935	Total Completions this date 1934
Alabama	..	..	..	..	.....	..	1
Arkansas	3	2	..	1	140	32	12
California	10	7	1	2	3,510	90	46
Colorado	..	..	..	..	.....	1	3
Illinois	..	..	..	..	.....	4	1
Indiana	14	7	7	..	.....	30	37
Kansas	19	15	..	4	10,850	158	105
Kentucky	4	2	1	1	120	16	8
Louisiana	16	10	2	4	3,400	96	91
Michigan	8	6	1	1	765	46	60
Mississippi	..	..	..	..	.....	4	4
Montana	1	..	..	1	.....	8	11
New Mexico	3	2	..	1	7,610	31	12
New York	..	..	..	..	.....	..	3
Ohio	49	19	19	11	340	225	150
Oklahoma	62	30	6	26	62,750	277	264
Pennsylvania	1	..	1	..	.....	22	60
Texas	185	140	2	43	667,965	1,375	1,194
Utah	..	..	..	..	.....	..	3
W. Virginia	25	10	12	3	90	65	67
Wyoming	..	..	..	..	.....	1	6
Total this week	400	250	52	98	757,540	2,481	2,138
Total last week	352	238	29	85	702,362	2,081	..
Total this year	2,481	1,593	229	559	4,522,275	..	..

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
March 5, 1933	.....	.....	Cut 24.
May 2, 1933	.....	Cut 19.	.....
May 9, 1933	Cut 20	.....	.....
May 22, 1933	Up 10.	.....	.....
June 19, 1933	Up 10.	Up 19.	.....
June 26, 1933	Up 10.	.....	Up 9-12
July 6, 1933	Up 13.	Up 10.	.....
July 17, 1933	Up 15.	.....	.....
July 28, 1933	Up 15.	.....	.....
August 11, 1933	Up 10.	.....	.....
August 24, 1933	.....	Up 10.	.....
August 30, 1933	Up 15.	.....	.....
September 6, 1933	Up 10.	Up 10.	Up 15.
September 8, 1933	.....	Up 15.	.....
May 1, 1934	Up 10.	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25.	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Three percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

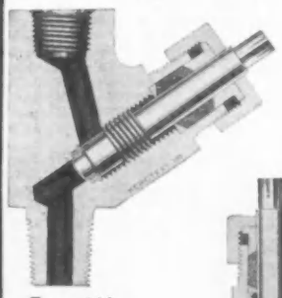
Montana—Three percent of gross value at well and ⅛-cent per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

KEROTEST
REGISTERED U. S. PAT. OFF.

YOUR XMAS TREE NEEDS KEROTEST GAUGE SHUT OFF VALVES



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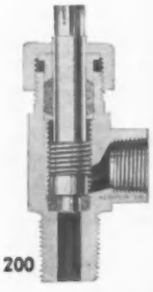
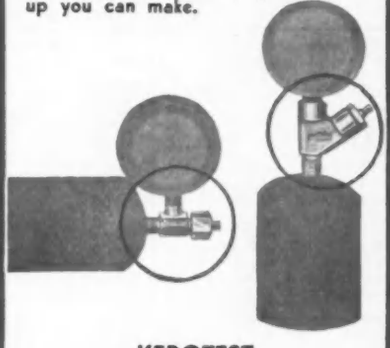


Type 200

You are always trying to reduce the number of threaded joints on your high pressure lines!
Here is a way to save several of them. Use KEROTEST FORGED STEEL GAUGE SHUT-OFF VALVES.
Inserted in a tapped bull plug on your well string or flow lines and no fittings of any kind are required.
Made of Heavy Steel Forgings suitable for 3000 lbs. W. P., and tapped for vertical or horizontal connections. (See illustrations).
Mighty convenient to use for sampling valves, blow-offs and drips.
They cost but little money—far less than a high pressure globe valve and fittings—and yet assure the most effective and satisfactory gauge hook-up you can make.



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Deviation Rule Opposed At Texas Proration Hearing

Austin, Texas.—The statewide proration hearing held before the Texas Railroad Commission in Austin last week failed to develop any controversial issues relating to the allocations made to the fields.

A new rule proposed by the commission to limit the deviation of wells drilled in the state brought protests from attorneys representing several of the larger operators. The proposed rule read as follows:

"Any well hereafter drilled in the State of Texas for oil and/or gas shall be drilled in such a manner as to penetrate the top of the producing formation at a position not farther than one-half of the distance between the vertical axis of the well and the property line upon which said property the well is being drilled; nor shall the said well penetrate producing formation more than one-fourth of the distance between the said well and the nearest producing well or offset location as arrived by the spacing program as set forth in the rules and regulations of the railroad commission for the particular field in which said well is drilled.

"A deviation test on any well hereafter drilled in Texas must be made at intervals of 500 feet, the first of said tests to be made at the depth of 500 feet, and a similar test to be made at each 500 feet thereafter, and if the total deviation from the vertical as reflected by these tests shows the point of penetration of the producing formation of a well to be over the distance specified in the first paragraph hereof, the commission may order the well surveyed at the cost of the operator, and the railroad commission reserves the right to compel the operator to correct the deviation until such deviation shall comply with this rule.

"Every person hereafter drilling a well for oil and/or gas in the State of Texas must file a report under oath, which report must be filed at the same time of the completion report, which report must set forth the results of the various deviation tests made upon said well. No pipe line connection shall be allowed or no certificate of compliance shall be issued until it shall appear to the commission that the person drilling said well has complied with the provisions of this rule.

"The commission reserves the right to make exceptions to this rule for good cause if and when the commission finds that it is necessary and to the best interests of the conservation laws of the state of Texas and *to protect vested rights;* and for those wells which are drilling on tracts of land containing less acreage than set out in the rules and regulations of the railroad commission for the specific field in which said well is drilled. Any person desiring an exception under this rule must file his application with the Railroad Commission of Texas setting forth the necessity and the reason for such exception, and before any well can be drilled as an exception under this rule, the person drilling such well must have the authority in writing for such exception from the chief supervisor of the Railroad Commission of Texas, at Austin, Texas, which said order must set forth the maximum deviation to be allowed the drilling of the particular well of which said exception was applied for; said exception must be procured before drilling operations commence.

"The commission will have authority to vary from this rule in cable wells."

Attorneys immediately arose and objected to the promulgation of the rule as prepared. They declared that they believed it included some clauses which should be eliminated entirely, and protested that they had had no opportunity to study the question.

R. E. Hardwicke, Fort Worth attorney, protested vigorously against the inclusion of any reference to "vested rights." He declared that the commission supervisor would hardly be qualified to pass on these rights, and that he himself could not give an adequate definition of the term.

Judge C. L. Black, representing the Mid-Kansas Company, also protested againt the inclusion of this phrase.

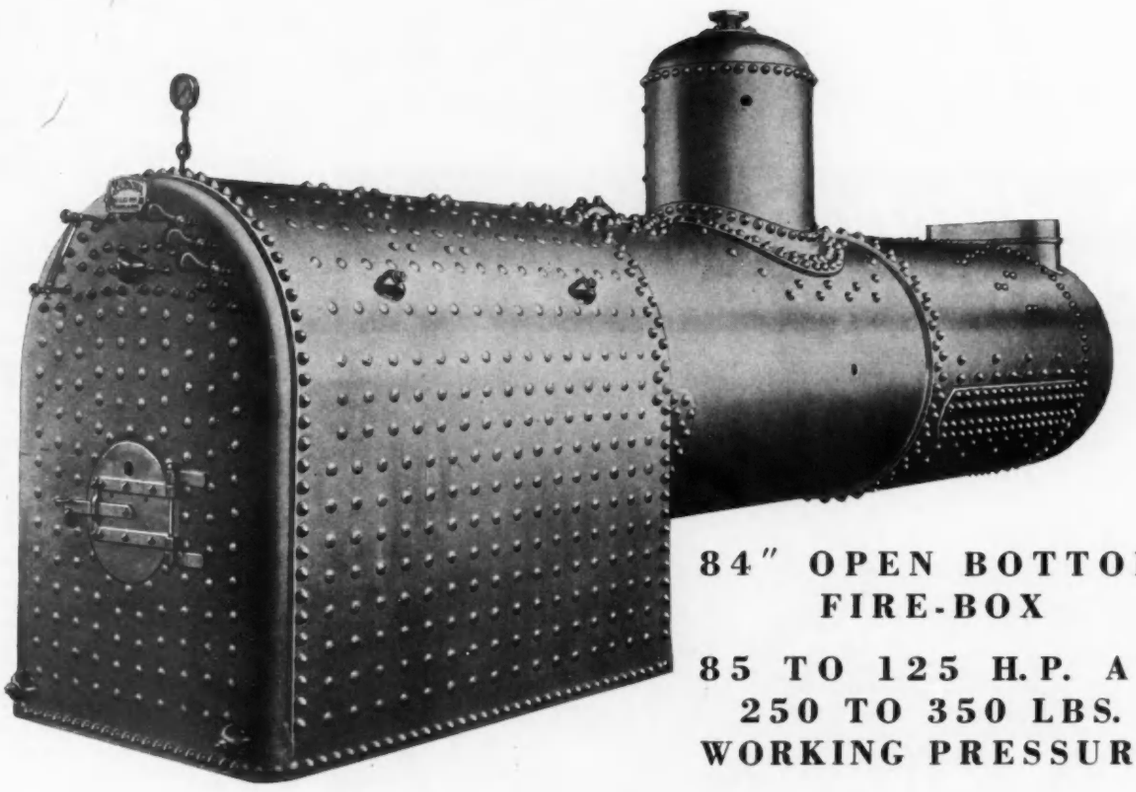
"We had in mind," declared Chairman Thompson, "the idea of conserving whatever rights might remain. I think that it is time we began to protect vested rights and state's rights," he declared.

"That phrase should be eliminated," insisted Hardwicke, "to prevent the commission from getting into a jackpot. You certainly cannot take away any vested rights by the promulgation of rules, neither can you add anything to them." He argued that the addition of this phrase was mere surplusage.

"I agree with Mr. Hardewicke," said Judge Black. "Every regulation of the police power is an abridgement of vested rights. If you except vested rights you have a rule that says one thing in one breath and takes it back in the next."

Chairman Thompson stated that the promulgation of any rule on the subject would be delayed until the state-wide hearing to be held in March.

A new
KEWANEE BOILER



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On this Open Bottom Type, the wrought steel mud ring is riveted without scarfing plate corners, which allows free access along full length of mud ring through cleanout handholes. Handhole cover plates and bolt are forged in one piece. Bull Head rivets in Kewanee Oil Country Boilers are the same style and quality as used in U. S. Navy Battleships.

The Kewanee Oil Country Drilling Boiler is considered the easiest firing boiler in the field and one of the best constructed. Its adoption is equivalent to a guarantee of freedom from annoying and expensive shut-downs, and that is why hundreds are in daily use in the great oil fields.

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An Interstate Compact to Conserve Oil and Gas

ARTICLE I

THIS agreement may become effective within any compacting State at any time as prescribed by that State, and shall become effective within those States ratifying it whenever any three of the States of Texas, Oklahoma, California, Kansas and New Mexico have ratified and Congress has given its consent. Any oil-producing state may become a party hereto as hereinafter provided.

ARTICLE II

The purpose of this compact is to conserve oil and gas by the prevention of physical waste thereof from any cause.

ARTICLE III

Each state bound hereby agrees that within a reasonable time it will enact laws, or if laws have been enacted, then it agrees to continue the same in force, to accomplish within reasonable limits the prevention of:

(a) The operation of any oil well with an inefficient gas-oil ratio.

(b) The drowning with water of any stratum capable of producing oil or gas, or both oil and gas in paying quantities.

(c) The avoidable escape into the open air or the wasteful burning of gas from a natural gas well.

(d) The creation of unnecessary fire hazards.

(e) The drilling, equipping, locating, spacing or operating of a well or wells so as to bring about physical waste of oil or gas or loss in the ultimate recovery thereof.

(f) The inefficient, excessive or improper use of the reservoir energy in producing any well.

The enumeration of the foregoing subjects shall not limit the scope of the authority of any State.

ARTICLE IV

Each State bound hereby agrees that it will, within a reasonable time, enact statutes, or if such statutes have been enacted then that it will continue the same in force, providing in effect that oil produced in violation of its valid oil and, or, gas conservation statutes or any valid rule, order or regulation promulgated thereunder, shall be denied access to commerce; and providing for stringent penalties for the waste of either oil or gas.

ARTICLE V

It is not the purpose of this compact to authorize the States joining herein to limit the production of oil or gas for the purpose of stabilizing or fixing the price thereof, or create or perpetuate monopoly, or to promote regimentation, but is limited to the purpose of conserving oil and gas and preventing the avoidable waste thereof within reasonable limitations.

ARTICLE VI

Eact State joining herein shall appoint one representative to a commission hereby constituted and designated as THE INTERSTATE OIL COMPACT COMMISSION, the duty of which said commission shall be to make inquiry and ascertain from time to time such methods, practices, circumstances and conditions as may be disclosed for bringing about conservation and the prevention of physical waste of oil and gas, and at such intervals as said commission deems beneficial it shall report its findings and recommendations to the several States for adoption or rejection. The commission shall have the power to recommend the co-ordination of the exercise of the police power of the several States within their jurisdictions to promote the maximum ultimate recovery from the petroleum reserves of the said States and to recommend measures for the maximum ultimate recovery of oil and gas. Said commission shall organize and adopt suitable rules and regulations for the conduct of its business.

No action shall be taken by the Commission except: (1) by the affirmative votes of the majority of the whole number of the compacting States, represented at any meeting and (2) by a concurring vote of a majority in interest of the compacting States at said meeting, such interest to be determined as follows: Such vote of each State shall be in the decimal proportion fixed by the ratio of its daily average production during the preceding calendar half-year to the daily average production of the compacting States during said period.

ARTICLE VII

No State by joining herein shall become financially obligated to any other State, nor shall the breach of the terms hereof by any State subject such State to financial responsibility to the other States joining herein.

ARTICLE VIII

This compact shall expire September 1, 1937, but any State joining herein may, upon sixty (60) days notice, withdraw herefrom.

The representatives of the signatory States have signed this agreement in a single original which shall be deposited in the archives of the Department of State of the United States, and a duly certified copy shall be forwarded to the Governor of each of the signatory States. Any oil-producing State may hereafter become a party hereto by fixing its signature to a counterpart to be similarly deposited and certified, and ratifying the same.

Done in the City of Dallas, Texas, this sixteenth day of February, 1935.

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OKLAHOMA CITY

Texas Allowable for March Is Increased

Austin, Texas.—The Texas Railroad Commission has issued a new statewide proration order to become effective on March 1. Allowables for all fields in the state total 1,028,549 barrels daily. This total is based on actual allocations to all fields except East Texas and the two Government Wells fields. The new allocation is 13,729 barrels higher than that provided in the order of February 1.

West Texas received the largest increase, 2555 barrels per day. The Gulf Coast was second with an increase of 2473 barrels. Southwest Texas was raised 1828 barrels, and East Central Texas was allowed an additional 199 barrels. There were no changes in other districts.

New allowables by districts are as follows: Panhandle, 60,300 barrels; East Texas, based on 3.6 percent of the hourly potential (estimated), 438,000 barrels; North Texas, 59,400 barrels; West Texas, 147,610 barrels; East Central Texas, 52,152 barrels; Southwest Texas, 40,613 barrels; North and South Government Wells (estimated), 19,842 barrels; Gulf Coast, 179,632 barrels; West Central Texas, 31,000 barrels.

Mykawa Extended

Houston.—The Mykawa field of Harris County was extended approximately one half mile to the northeast when West Production Company completed J. Ryemon et al 1, for 51 barrels of high gravity oil per day through a three sixteenths-inch choke from 4515 feet. The well is located 270 feet from the north line and 403 feet from the west line of 20-acre tract in F. J. Rothass Survey.

Commission Holds Gas Waste Hearing

Austin, Texas.—The Texas Railroad Commission held an extended hearing last week with reference to the waste of residue gas in the Agua Dulce and Pledger fields in South Texas.

Several months ago the commission issued a permit to a stripping plant in each field permitting the operation of the plant, but requiring that all residue gas be returned to the producing formation.

Subsequently the commission was petitioned to eliminate the repressuring clause of the permit. Representatives appeared before the commission at hearings and presented evidence to show that the operation of the plants was impossible from the financial standpoint if the repressuring plants were installed.

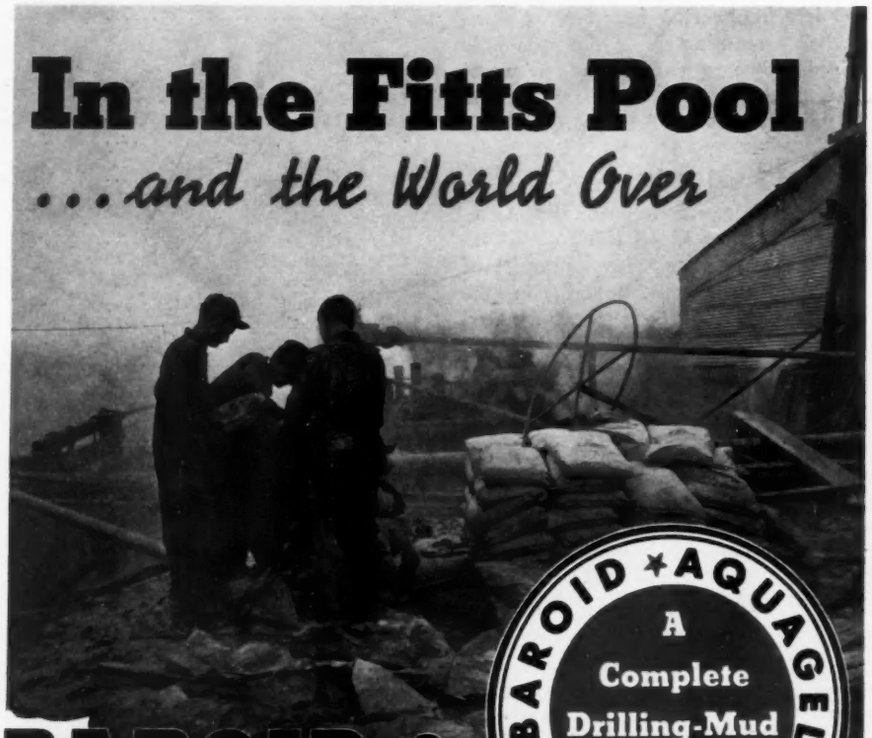
They argued that the continued operation of the plants would materially increase employment, and result in more rapid development in the fields where the gas was proposed.

The commission finally acceded to these requests, but recently the petitioners were back asking that the permits be revoked, or the repressuring requirements be reinstated.

Panhandle Crude Stocks Substantially Lowered

Pampa, Texas. — An aggregate of 2295 barrels of oil and 10,000,000 cubic feet of gas production was added to the potential rating of the Texas Panhandle through the completion of eight producers during the past week. Shell Petroleum Corporation scored the outstanding well in completing T. J. D'Spain 7, situated in the prolific area in western Wheeler County, rated at 1080 barrels of oil during the first 16 hours after drilling to 2514 feet.

Crude stocks in the district were withdrawn at average rate of 6940 barrels daily during January, leaving 13,697,450 barrels on hand at the close of the month, or 2,870,350 barrels less than the amount held 12 months previous.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Guthrie Wildcat's Chances Are Dimmed

Guthrie, Okla.—Shell Petroleum Corporation's Hirzel 1, SE SW SW 7-16n-2w, important wildcat test less than one half mile southwest of the city limits in south central Logan County, did not look as good as when reported a week ago and there are many who have ceased to accord it chances for commercial production. The test had run high on the upper markers until top of the Hunton lime was reached at 5501 feet. Fifty-five feet of Hunton, considerably more than was expected, was logged and Sylvan shale was thicker than expected. Top of the Viola lime was encountered at 5674 feet and the formation cored dry from 5676 to 5692 feet, recovering four feet. Operators were reaming down the core hole and planning to core ahead. Several good showings have been reported in the upper horizons.

Garfield County

Billings, Okla.—Herndon Drilling Company et al's Allen 1, NE NE SW 35-24n-3w, wildcat test 2½ miles southwest of here and apparently located on the Nemaha Ridge trend in northeastern Garfield County, had set surface casing with total depth at 100 feet and was ready to drill ahead. This test is located one mile east of an old Wilcox sand well drilled several years ago by Shell Petroleum Corporation and still producing without having been offset. Ownership in the test is as follows: W. O. Smythe, one quarter; Herndon Drilling Company, one quarter, and Marathon Oil Company, one half. Other acreage in the same section is owned by Marathon Oil Company, W½ SW Barnsdall Oil Company S½ NW and SE; Sinclair Prairie Oil Company, S½ NE; Gypsy Oil Company, N½ NW; and Empire Oil & Refining Company, N½ NE. Marathon owns a considerable amount of acreage in the vicinity.

New Work Doubles In Oklahoma Fields

Tulsa.—The Fitts pool kept its stride of the past several months and led the state in number of completions, size of wells and amount of new work during the week. By virtue of the activity in this pool Pontotoc stood at the head of the list with 12 first reports, 10 of which were in Fitts; Osage County was second with 10 firsts; and Seminole County third with nine. Okfuskee and Okmulgee Counties were tied with five starts each; Carter County had four; Creek County, three; Jefferson County, two; and Atoka, Greer, Hughes, Jackson, Lincoln; Love, Marshall and Pottawatomie Counties, one each, a state total of 58 as compared to 29 during the preceding week.

From the completion viewpoint the state stepped far ahead of its 1935 average when a total of 62 operations went off of the active list. Of these 30 were oil wells with combined initial of 62,749 barrels, six were dry gas wells with combined initial volume of 24,225,000 cubic feet, five were locations, rigs or cellars abandoned and 11 were dry holes, involving a total of 140,819 feet of drilling. Included in this was 1005 feet of drilling in five old wells.

Oklahoma Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARTER COUNTY—		
Smith & McDorman, Norton 1, nw nw se nw 32-2s-2w	2	308
CHOCTAW COUNTY—		
J. V. Schrivner et al, Swink, cne se 29-6s-20e	*	913
COMANCHE COUNTY—		
Johnson & Landoll, Johnson 1, sw sw sw sw 26-2n-11w	*	950
CREEK COUNTY—		
Shamblin et al, R. Williams 1-A, nw nw ne se 21-15n-8e (pb 2450)	16	2853
Murta Oil Co., Jackson 1-A, sw sw nw sw 8-16n-11e	¶1	1758
HUGHES COUNTY—		
Magnolia Pet. Co., B. Dale 3, sw sw sw 16-7n-8e	*	3242
JEFFERSON COUNTY—		
George Pace et al, W. W. Woodworth 1, ne nw nw 10-4s-4w	*	3031
LINCOLN COUNTY—		
Tom Bennett, Bolby 1, cse sw 27-12n-2e	*	5081
Magnolia Pet. Co., Ross 6, se se se 2-14n-3e	157	4278
LOGAN COUNTY—		
Amerada Pet. Corp., Denny 2, ne se se 33-17n-4w	¶3¾-966	6167
MARSHALL COUNTY—		
R. H. Burnes, Snell 1, nw ne sw sw 31-7s-6e	*	495
F. H. E. Oil Co., Snell 2, nw nw nw nw 31-7s-6e	15	512
McINTOSH COUNTY—		
Harmon Oil Co., Seagro 3, se se ne ne 10-12n-14e	*	774
MUSKOGEE COUNTY—		
Wachob, Crittenden 1, cwl ne ne 7-14n-19e	10	675
Mussellum, Spaulding 3, nw sw se ne 9-15n-18e	12	1012
Arthur Oil Co., Townsite 1, sw nw ne ne 34-15n-18e	40	1015
OKFUSKEE COUNTY—		
W. A. Flemming, Pincham 6, cnl se se 2-10n-11e	25	1691
Mid-Continent Pet. Corp., Dindy "B" 1, se se sw ne 31-11n-11e (otd 3037)	¶5	3667
OKLAHOMA COUNTY—		
Charles E. Carter, Suenram 1, ne ne ne 7-13n-3w	*	6858
OKMULGEE COUNTY—		
Jordan et al, Douglass 1-A, sw sw nw ne 22-12n-13e	¶2	1870
Art Thompson, Douglass 1-A, cnl nw se 22-12n-13e	¶1	910
King et al, Anderson 4, cel w½ ne 28-12n-14e	¶¼	660
J. G. Catlett, Williams 1-A, sw sw nw sw 29-14n-12e	*	2909
W. B. Pine, Smith 11, se se sw ne 27-14n-13e	*	2025
Aggis Drilling Co., McKinney 2-A, csl nw sw 16-15n-14e	5	1084
Klingensmith, Farr 8, csl se nw 35-16n-11e	40	1836
OSAGE COUNTY—		
W. L. Wickett 2, ne se ne se 33-21n-10e	*	314
Idaho Oil Co., 5, cs½ s½ ne 11-21n-11e (otd 2255) (pb 2255)	5	2357
Comail Oil Co., 5, se se nw sw 32-22n-8e	10	2302
I. T. I. O. Co., 1, ne se sw 5-22n-10e	*	2427
J. R. Higgins et al, 15, sw ne sw se 25-23n-8e (otd 2057)	150	2072
PITTSBURG COUNTY—		
Hailey et al, Smithson 1, nw nw nw 35-6n-12e	spd.	abn.
PONTOTOC COUNTY—		
Carter Oil Co., L. Brown 2, ne se se 25-2n-6e	14,400	4280
Carter Oil Co., Craddock 2, se se ne 25-2n-6e	17,760	4305
Fleetborn, Norris 1, se nw ne 25-2n-6e (pb 4466)	57	4488
Loual et al, Craddock 3, sw ne ne 25-2n-6e	175	4465
Stanolind Oil & Gas Co., Norris "E" 3, ne sw se 25-2n-6e	12,912	4284
A. J. Hardin 5, sw nw sw 30-2n-7e	10,056	4220
Tendor Oil Co., Burk "D" 1, se ne sw 32-5n-5e	*	2598
POTTAWATOMIE COUNTY—		
Commercial Drilling Co., Ray 1, ne se ne 2-6n-4e	cel.	abd.
Magnolia Pet. Co., Sharp 1, ne ne sw 6-6n-5e (pb 3265)	*	4270
Mid-Continent Pet. Corp., Schrader 2, nw nw nw ne 6-6n-5e (otd 4073)	**677**	4209
Dingee et al, Risenhoover 1, sw nw ne 14-7n-4e (pb 3465)	10	4157
Blackwell Oil & Gas Co., Waylahpease 2, sw nw sw 7-9n-5e (pb 4212)	93	4214
Phillips Pet. Co. et al, Grove 1, se ne se 5-10n-4e (pb 4495)	24	4521
SEMINOLE COUNTY—		
Oklahoma Oil Corp., Jennie 1, sw sw se 24-5n-5e	25	2625
Gypsy Oil Co., Grayson 1, sw sw nw 13-6n-5e	519	3816
Texhoma Oil Co., Bowles 1, sw se nw 10-6n-6e	rog	abd.
Pittsburg Pipe Co., Harris 1, sw sw nw 18-6n-8e	rig	abn.
Champlin Refining Co., See 5, nw nw ne se 30-7n-8e	480	3034
Magnolia Pet. Co., Reed 5, ne nw se se 30-7n-8e	552	3098
Stanolind Oil & Gas Co. & Amerada Pet. Corp., Sarkey "B" 1, ne nw se 31-7n-8e (otd 4135)	2708	4152
Champlin Refining Co., Wolf 3, nw sw nw 32-7n-8e	lcn.	abn.
Amerada Pet. Corp., J. Tiger 1, nw ne sw 3-8n-5e (pb 3954)	*	4140
J. Tiger 6, ne ne sw 3-8n-5e (pb 3942)	*	4170
Phillips Pet. Co., Fixico 4, nw sw ne 26-9n-6e (pb 2571)	*	4158
Carter Oil Co. et al, McKimis 1, ce½ se sw 18-10n-6e	848	4596
STEPHENS COUNTY—		
Clark, Cowden & Kilgore, Simpson 2, nw sw ne 11-1n-5w (otd 1070)	*	1175
Western Oil Inc., Stover 1, nw nw sw 16-1n-8w	¶16	2395
George Pace, Watkins 16, cn½ sw ne se 21-2s-7w	*	1737
WAGONER COUNTY—		
J. E. Murphy, Moody 1, sw se sw 19-18n-16e	*	1560
D. Geiger, Asberry 1, ne ne ne nw 36-19n-15e	*	733

*Failures; †Junked; ¶Million cu. ft. gas.

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Noble Discovery Gets Connection

Otoe, Okla.—Gulf Pipe Line Company of Oklahoma is laying a temporary three-inch line from its Cushing-Tonkawa line to Marathon Oil Company's Gilbert 1, NE NE NE 24-22n-2e, wildcat discovery well 7½ miles east of here in eastern Noble County. First Wilcox sand was logged from 4411 to 4423 feet and second Wilcox sand from 4449 to 4480 feet, the total depth. The well has been shut in since late in January, 1935, when all tankage had been filled. On the last reported test it flowed 418 barrels of 43 gravity oil in 17 hours, cutting one percent of drilling fluid. When it is cleaned up and fully tested operators expect a considerably better well than has been indicated by preliminary tests.

Two Small Crescent Pool Wells Completing

Crescent, Okla.—Two wells considerably smaller than the average of their offsets were at the completion stage in the Crescent pool near here in western Logan County. Gypsy Oil Company and Carter Oil Company's Knowles 3, SW SW NW 34-17n-4w, shot 60 quarts at 6177 to 6190 feet and a like amount at 6200 to 6213 feet. On February 19 the well yielded 170 barrels in four hours and on the following day, 356 barrels in seven hours on gas lift. The Texas Company's Denney 3, NE NE SE 33-17n-4w, yielded 680 barrels of oil and 65 barrels of fresh water in four hours on February 19 and on the following day yielded 1175 barrels in 24 hours with no water. Both are in the southern portion of the pool.

Kansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
Stanolind Oil & Gas Co., Herger 1, cse nw 9-20s-11w (pb 3337)	16	3342
BUTLER COUNTY—		
Richmond, Brissey 1, sw ne se 8-27s-6e (pb 2764)	9	3226
Rex et al, DeMoss 2, nw ne nw 8-28s-7e	36	2701
ELK COUNTY—		
Minnehoma & Murphy, Ferguson 5, nw se sw nw 3-31s-8e	5	2013
KINGMAN COUNTY—		
Skelly Oil Co., N. Miles 6, se ne se 19-27s-10w	95	3520
McPHERSON COUNTY—		
Shell Pet. Corp., Griffin "B" 5, e½ ne nw ne 14-19s-2w (pb 3356) ...	20	3361
Dickey Oil Co. & I. T. I. O. Co., Gray 1, nw nw se 2-20s-3w (otd 3060)	*	3073
Continental Oil Co., Graber 1, sw sw se 29-21s-1w	430	3331
Argo Oil Co., Newfeldt 3-B, se sw se 16-21s-3w (otd 3077)	*	3453
PRATT COUNTY—		
Atlantic Oil Co., Prentice 1, cse nw 18-28s-14w	*	4798
RENO COUNTY—		
Barnsdall Oil Co., Sabin "C" 6, se se se 11-23s-4w 2509		3621
Sinclair Prairie Oil Co., Harner 2, se se sw 14-23s-4w 1192		3611
Barnsdall Oil Co. & I. T. I. O. Co., Baughman 4, sw se ne 34-23s-4w..3334		3593
RICE COUNTY—		
The Texas Co., S. W. Grove 4, sw se ne 29-19s-9w 1141		3203
Yingling et al, Maupin 1, nw sw sw 1-18s-8w	*	3350
Phillips Pet. Co., Link 3, se nw sw 21-19s-9w	775	3234
Ramsey, Hilton 2, se ne sw 6-20s-9w	233	3005
RUSSELL COUNTY—		
Hartman and Blair, Gurney 1, se se nw 23-14s-14w	359	3006
SEDGWICK COUNTY—		
Dickey Oil Co., Heath 1, se ne nw 20-28s-1e	694	3154

*Failures; †Junked; ¶Million cu. ft. gas.

Kansas Operators Start 28 New Tests

Wichita, Kansas. — Kansas development remained on an even keel during the week when 28 first reports were made and 19 tests completed. Reno County led in new work with eight first reports; Ellsworth, Russell and Sedgwick Counties had three each; Rice and Sumner Counties, two each; and Barton, Greenwood, Harvey, McPherson, Ness, Rooks and Stafford Counties, one each. Fifteen oil wells yielded at a total calculated 24-hour rate of 10,848 barrels of which three wells in the Burrton-Haury pool of northeastern Reno County were responsible for 7035 barrels. The completion reports included four dry holes, bringing the total for the week to 19 completions which involved 56,458 feet of drilling, including 389 feet in two old wells.

Franklin County Gas Field Active

Paola, Kans.—Glenn Seaborn et al completed Shipp 1, NW NE 4-16n-20e, Franklin County, for a 2,484,000 cubic foot gas well at 640 feet. Top of the sand was 630 feet.

Charles Judd completed a dry hole on the Tullos farm, NW SE 3-16-20e, one half mile southeast of the Shipp well. Anderson and Willis are drilling at 275 feet on the Sassaman farm, 800 feet east of the Shipp well and is running on the same level as the new gas producer.

Glenn Seaborn et al have staked a location in the SW 4-17n-20e, on the Nesbit farm. J. W. Lemons and Sons are 500 feet deep on Geiger 3, NW 17-17n-21e. Same parties are down 150 feet on Heminger 2, N½ NW 21-17n-21e. Their Heminger 1 was the discovery well of the new gas field.

In Miami County, Kano Oil Company is completing McCoon 50, Section 20-17n-21e, for an estimated 10-barrel well. H. W. Mitchell is shut down at 200 feet in the W½ SE 32-19n-23e. Hal Lambeth is rigged up to drill on a location one half mile east of John Brown's lookout.

In Linn County, Fulkerson et al are drilling a gas test on the Cox farm, southeast of Beagle. Branson and Hay have spudded and shut down on the Milton farm near Fontana.

Phillips Subsidiary Buys Kansas Line

Bartlesville, Okla.—Announcement was made during the week of the purchase of Central Kansas Pipe Line Company by Standish Pipe Line Company, a subsidiary of Phillips Petroleum Company. System of the Central Kansas company consists of approximately 142 miles of combined trunk and gathering lines located in McPherson, Reno, Rice, Ellsworth, Harvey and Barton counties. The official announcement stated that the newly acquired system would be connected to the Standish system by the construction of an 11-mile line from the Ritz-Canton field to a point near the city of McPherson. John H. Kane, executive vice president of Phillips Petroleum Company, has announced that all connections previously served by the former owners will be taken over on March 1.

Three East Texas Wildcats Abandoned

Tyler.—Three wildcats in the Woodbine sand belt of East Texas were considered eliminated during the past week because of encountering salt water in the sand, while a fourth is showing a small volume of gas with spray of salt water on a secondary fault zone southwest of the Mexia field, Limestone County.

David J. Crawford et al's Vol DeLong 1, located 1½ miles southwest of the Cedar Creek fields, a depleted oil area, may be the forerunner of another small pool for Limestone County through having made an initial of 640,000 cubic feet of gas with salt water from broken sand at 2779-2807 feet. The gas volume dropped to about one-quarter million cubic feet later in the week due to the close proximity of dry hole. Only a small producing area around the well is possible.

J. K. Wadley et al's W. J. Carnes 1, northeast Van Zandt County wildcat, logged salt water sand in drilling to the 4750-foot level, and will abandon. Pioneer Exploration Company's Gentry 1, Henderson County test situated three miles west of Athens, was reported to have logged salt water in drilling below 4075 feet. Freestone County's contribution to the list of failures was credited to F. A. Gillespie and Sons' Orand 1, located 1¾ miles north of Fairfield, with the hole bottomed in salt water sand at 4410 feet.

East Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Blackwell O&G Co., W. P. Moore 8 (27.86-ac)	7100	3655
W. E. Brown et al, W. H. Frederick 1 (13-ac)	; 480	3612
W. R. Dearing et al (was Slaughter), Frederick 1-B	480	3585
Frederick 2-B	480	3581
Delta Drl. Co., Henson 6-A (16.02-ac)	480	3554
R. W. Fair & Thompson, A. J. Deason 3 (9.2-ac)	1000	3652
W. E. Wiley 4-B (27-ac)	360	3626
Ralph E. Fair-Lucey Pet. Co., B. F. Maxwell 10-A (87.41-ac)	3600	3714
G. B. R. Oil Corp., L. Harmon 11 (26.87-ac)	8000	3830
Hamilton Pet. Co.-Jenkins Bros. Wm. Jobe 25 (109-ac)	1500	3630
Humble, Ida Holt 12-C (99-ac)	5000	3810
Chas. Pilgreen 14 (136.4-ac)	8100	3788
A. Simmons 4 (30-ac)	7200	3797
Heywood White 15-B (132.96-ac)	3500	3733
C. W. Wilson 10 (96.9-ac)	6500	3707
Hunt Prod. Co., R. W. Fair 13-B (138½-ac)	6900	3685
R. W. Fair 19-C (211.4-ac)	8800	3645
Internat'l Oil Co., L. J. Pinkston 7 (21-ac)	7000	3680
Marathon, H. Clay 14 (113.56-ac)	480	3734
C. L. Graham 13, Acct. 2 (134-ac)	7000	3656
Pointer Oil Co., T. O. Wright 4 (9.7-ac)	8100	3672
Sinclair Prairie, E. E. Moores 4-AA (96-ac)	2400	3739
Dora Wright 19 (152.1-ac)	8500	3754
Dora Wright 20 (152.1-ac)	8500	3740
R. G. Wright 11 (107.62-ac)	8400	3734
R. G. Wright 12 (107.62-ac)	8000	3708
R. G. Wright 13 (107.62-ac)	8500	3708
R. G. Wright 14 (107.62-ac)	8400	3693
A. L. Slaughter et al (was R. H. Dean), Frederick 1	480	3567
Sun, Mrs. A. V. Ritch 8-A (99-ac)	6000	3665
J. J. Denton 3-B (37.96-ac)	5000	3768
Texas Co., J. D. Stone 7 (50-ac)	1500	3678
Texas-Jersey Oil Corp., G. W. Eaton 3 (1.48-ac)	8000	3796
KILGORE AREA—		
Atlantic, L. P. Griffin 15 (85.66-ac)	9800	3595
F. H. Brown-H. E. Oliver & Tide Water, Hindman 6 (22.89-ac)	11,000	3633
DeArman & L. O. McMillan, W. Robertson-Shell 8 (100¾-ac)	5200	3713
Gulf, C. Brown 39 (263.52-ac)	6600	3530
G. W. Culver 22 (209.01-ac)	5500	3568
S. Hilburn 71-A (80.74-ac)	8000	3584
M. B. Hughey 8 (50-ac)	7200	3526
A. Muckelroy 21 (152.05-ac)	8500	3577
Hunter Co. (Pelican), Spear-Laird 10 (92¼-ac)	8600	3651
Invincible Oil Co., M. B. Weiss 28 (81.27-ac)	11,000	3621
Kirby Pet. Co., Jeff Reddic 10 (96.59-ac)	7200	3724
Roger Lacy et al, Grif Davis 5 (15-ac)	12,000	3607
Lewis Prod. Co.-Selby O&G Co., C. B. Pegues 9 (40-ac)	8000	3620
Magnolia, S. E. Brox 8 (70.32-ac)	8800	3720
Grif Davis 8 (25-ac)	9600	3640
Alonzo Hicks 11 (99-ac)	8000	3702
Overton Ref. Co., Rufus Jones 2	500	3694
Rufus Jones 3	†	3672
Quad Corp., B. Duncan 6-A (40-ac)	7500	3679
Restal Drl. Co.-E. C. Laster, Inc., Wm. Britton 1-B (10-ac)	200	3636
Shell, Laird-Crim 23-A (211.31-ac)	7500	3586
W. P. Moore 15 (140-ac)	7200	3694
Sinclair Prairie, M. T. Cole 40 (666-ac)	5000	3577
M. T. Cole 41 (666-ac)	3500	3568
M. T. Cole 42 (666-ac)	6500	3576
M. T. Cole 46 (666-ac)	8400	3602
Stantex Pet. Co., L. B. Morse-Bright-well 4 (11.79-ac)	8000	3630
Texas Co., H. T. Elder 25 (53½-ac)	6700	3645
Tide Water, J. S. Bean 2-B (10-ac)	9000	3672
E. R. D. Bivins 20 (200-ac)	8800	3630
G. H. Vaughn Prod. Co., Sexton 1 (20-ac)	600	3694
LONGVIEW AREA—		
A. C. F. Oil Co., E. E. Anderson 5 (13 4/7-ac)	3000	3655
W. D. Ambrose et al, Jones 1-B	9700	3600
Atlantic & J. K. Wadley, M. Turner 24 (161.57-ac)	10,600	3560
Eastern Texas Pet. Co., T. J. Dunbar 10 (169-ac)	200	3654
Empire, L. J. Rogers 8 (70.02-ac)	9500	3614
Fain-McGaha Oil Corp., A. Tooke 14 (100-ac)	9400	3770
F-H-E Oil Co. et al, R. Christian 12 (61-ac)	9200	3675
Gulf, F. C. Fishburn 24 (200-ac)	8800	3512
Humble, W. R. Hughes 34 (245.6-ac)	7000	3675
Jackson-Wise-Snedden, R. Corbin 6-A (40-ac)	9600	3654
Magnolia, W. E. Jones 16 (116¼-ac)	10,500	3680
Mullendore & Berry, M. McGrill 4 (20-ac)	8700	3668
Oils, Inc., A. J. Sanders 13 (73.63-ac)	2500	3614
Roeser-Pendleton, Inc., J. T. Hopkins 5 (25½-ac)	8300	3538
Selby O&G Co.-Lewis Prod. Co., Snavely 15-D (105.9-ac)	9200	3598
Shell, C. C. Landers 17 (206¾-ac)	4500	3716
Sinclair Prairie, J. W. Akin 11-A (96-ac)	10,500	3622
M. Moncrief 36 (307.7-ac)	10,000	3580
M. Moncrief 37 (307.7-ac)	9600	3608
M. Moncrief 41 (307.7-ac)	10,200	3585
Sun, A. Tooke 10-B (80-ac)	9800	3591
Sutton & Hawkins, J. A. Whitaker 8 (35-ac)	10,500	3520
United East & West Oil Co., E. L. Walker 3 (67-ac)	200	3569
Yount-Lee, T. W. Lee 3-B (35.07-ac)	8000	3575
Miscellaneous Completions		
ANDERSON COUNTY (Cayuga Field)—		
Tide-Water-Texas Seabord Oil Co., N. N. Wills 5-B (377.1-ac)	3000	4085
VAN ZANDT COUNTY (Van Field)—		
Olson-Jensen Oil Co. (Lane-Tex), Listenbee 1	7	1279
Pure Oil Co., W. T. Jarman 12 (132.8-ac)	12,000	2958
R. L. Wells 17 (19.2-ac)	95	2972
Wildcat Completions		
WOOD COUNTY—		
Bryant & Spears, Consumers Lignite Co. 1	*	1660

*Failures; †Junked; ¶Million cu. ft. gas.

New Pool Opened in Shackelford County

Eastland, Texas.—Discovery of a shallow oil pool near the west line of Shackelford County has been credited to Jones, Stasney and the Reliance Oil & Royalty Corporation's G. R. Davis 1, which is showing for a 30-barrel pumper from sand at 1598-1607 feet. The well is located 520 feet south and 660 feet east of the northwest corner of the north 40 acres of the east 160 acres of Section 4, T. & N. O. Ry. Survey, or about two miles southwest of nearest production on the Morris-Buie ranch. An accurate gauge of the well has been delayed pending lowering of 6⅝-inch pipe to the top of the oil horizon. Owners of the well have been active in Shackelford and Jones Counties for some months, having developed production on the Nail ranch in Section 124, E. T. Ry. Survey.

Fisher County Well Encouraging

San Angelo, Texas.—Workover operations on Tide Water Oil Company and Merry Brothers & Perini, Inc.'s M. Howard 1, Fisher County wildcat producer, give promise of an effective water shut-off, after plugging back from 3677 to 3674 feet in dolomite limestone. The well flowed by heads, making 38 gravity oil with sulphur water, when drilled about five feet into the producing horizon early in February. The source of the water was doubtful, as no cement was used in landing 6⅝-inch pipe at 3468 feet, or on top of the expected producing horizon. Casing has since been lowered to 3554 feet, and swabbing test that followed has indicated an excellent fluid level. The owners hold leases on about 9600 acres around the well, which is located in the NE¼ Section 180, Block 2, H&TC Ry. Survey, about seven miles northwest of the Royston field. Two 3000-barrel steel tanks have been ordered, as a market outlet is uncertain.

Magnolia Petroleum Company has been one of the most active purchasers of lease protection around the edges of the discovery block, paying from $5 to $7.50 per acre. H. E. Ellzey and others are credited with having assumed drilling obligations in acquiring two wildcat blocks in Fisher County. In the south central part of the county, a block of about 3000 acres, centering on Section 7, Block 21, T&P Ry. Survey, will be given a 3400-foot test. A second block of about 2300 acres, centering on Section 51, Block 1, HT&B Ry. Survey, or one mile southwest of McCauley, is slated to have a test drilling within two months.

Coleman, Texas.—An offset test to the shallow wildcat producer on the White Brothers' ranch, McCulloch County, drilled by the Cardinal Oil Company missed the oil horizon and has been abandoned in lime at 740-745 feet. The company contracted to drill four 660-foot offsets as part of the consideration in taking over G. R. and W. N. White's fee 1, which opened the pool last December flowing 25 barrels of oil daily from sandy lime formation at 665-671 feet. The discovery well was seeking fresh water on the White Brothers' 30,000-acre ranch, and the oil strike resulted in a number of independents entering the district, taking blocks around the edges of the large ranch property with drilling obligations. The producer averages about 15 barrels of 37 gravity oil daily.

Acid Turns Old Dry Hole Into Producer

Abilene, Texas.—An ill-fated development program waged by independents in the Sanger area, located about four miles southeast of Abilene, Taylor County, in 1926 and 1927 with tests showing oil and gas in 1900-foot lime horizon over a wide area but not in commercial quantities now promises to be reversed by the introduction of acid treatment.

The area has attained a commercial oil producer as result of Clarco Oil & Refining Company, headed by I. E. Clark, former contractor in Louisiana and Arkansas, having taken over and acidized a test that was abandoned as a failure in 1924, with casing remaining in the hole. This apparent dry hole was completed by the Abilene-Texas Petroleum Company on the J. C. High land, SWc NE¼ Section 8, Lunatic Asylum Lands Survey, with a total depth of 2130 feet. The well was cased with 6⅝-inch pipe at 1970 feet, and showed a small amount of oil after shot in lime at 1990-2025 feet. Clark became interested in the area when local parties rigged up a temporary derrick and hoist to clean out the hole, and financed the cost of shooting the casing apart so as to treat the 1900-foot lime with a trial injection of acid. The well responded to 1000 gallons of acid solution by bailing and flowing about 90 barrels of high gravity oil in 36 hours. It is to be rigged up to pump, with prospects of a 50 to 75 barrel producer.

Sanger Oil & Refining Company, now dissolved, is credited with having expended more than $1,000,000 in drilling about one dozen tests in the general area, including several deep projects.

Clarco Oil & Refining Company, Leslie Spoonts and W. P. Morris have acquired leases on about 2700-acres situated about three miles southwest of the acid treated well, with an obligation to drill to the lime horizon in Sections 22 and 25, L. A. L. Survey. The former has contracted to drill a 2000-foot test in acquiring lease on the northwest 160-acres of Section 7, L. A. L. Survey, for $5.00 per acre. Caldwell Brothers, Brownwood, Texas, paid a like consideration in acquiring lease on the A. R. McClure 80-acres, being the S½ SW¼ Section 8, L. A. L. Survey, and are to start drilling within 60 days. H. Crissman et al are drilling a test on fee land of the City of Abilene, and in the SE¼ Section 66, L. A. L. Survey.

New Shallow Pool Opened in Wilbarger

Wichita Falls, Texas.—Discovery of a shallow oil pool about one mile northwest of the original South Vernon field, Wilbarger County, has been attained by Lawson and Leawell's Waggoner Estate 1 rated at from 50 to 75 barrels daily on pump from sand at 1649-1651 feet. It is located in NWc SW Section 99, Block 14, H. & T. C. Ry. Survey, and passed up a good show of oil in sand at 1433-1441 feet. A failure drilled to the lime horizon about midway between this new producer and the field proper severs the two areas.

A noticeable shift in lease trading and wildcat exploration work from heretofore popular areas in North Texas to Cooke and Montague Counties has been underway for several weeks. A general revival of wildcat drilling is well underway in the north portion of the two counties. A few of the major companies are lending financial support to new projects. The Hott field, which now has 26 pumpers in the 1500- and 1700-foot sandy-lime horizons, has greatly added to the popularity of Montague County, while older pools in the county have not been entirely defined for production. Cooke County has been thrown into the limelight by the recent completion of Petroleum Producers Company's Andress Brothers 5, which flowed 2000 barrels of oil per day through two-inch choke from sandy-lime at 1261-1270 feet. It is 400 feet east of the company's Andress 4, located 550 feet from the north and 200 feet from the west lines of lease in Jonathan Clark Survey, A-194, which proved to be a failure after drilling to 1462 feet.

West Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
PECOS COUNTY (Yates Field)—		
Stanolind, M. A. Smith 5-B	67,400	1248
McCULLOCH COUNTY—		
Cardinal Oil Co., White Bros. 2	*	745
PECOS COUNTY—		
Shell Pet. Corp., University-Carlson 1-A	*	2036
WARD COUNTY—		
Atlantic O. P. Co.-Penn Oil Co., Bennett 2-B	115	2553
California Co., B. D. Durgin 27	345	2562
J. F. York 15	160	2530
Gulf Prod. Co., Hutchings 38	425	2758
Roy A. Westbrook-H. Meredith-W. K. Cayton, Bennett 4	460	2535
WINKLER COUNTY—		
J. C. Maxwell-Atlantic O. P. Co., L. Daugherty 1	565	2962

*Failures; †Junked; ¶Million cu. ft. gas.

Texas Panhandle Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
Stanolind, E. Cooper 6	165	3160
GRAY COUNTY—		
Cambrian Oil Co., L. H. Webb 4	130	2543
Stanolind, Kinzer 1	245	3301
Wilcox O&G Co., Combs-Worley 33	145	3060
HUTCHINSON COUNTY—		
Stanolind, E. E. Watkins 3	125	3003
WHEELER COUNTY—		
Alma Oil Co., D. E. Johnson-Gulf 8	20	2494
Bell O&G Co., A. R. Plummer-Conoco 2	¶4-25	2519
Shell, T. J. D'Spain 7	¶5-1440	2514

*Failures; †Junked; ¶Million cu. ft. gas.

North Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
Barney Cockburn et al, R. J. Andrews 7, sec 2437	20	1398
F. P. Cullum et al, Falls-Ellis 23, blk 10	150	1151
Cullum & Alexander, Falls-Gulf 13, blk 14	60	1120
Fain-McGaha Oil Corp., C. S. Arnold 37	300	1205
Golding & Cochran, J. T. Richardson 1-B, blk 9	*	1298
W. B. Hamilton et al, Coffield 25	200	1197
S. J. Holt et al, T. J. Dempsey 1, blk 10	*	500
Hattie B. Madden, J. T. Richardson 1, blk 17	*	1351
Maxson & Panhandle Ref. Co., F. C. Green 33-B	35	1105
Perkins-Cullum Oil Co., Falls 136, blk 12	60	1140
Pet. Prod. Co., Harmonson 12	140	968
Sinclair Prairie, Falls-Boyles 7, blk 22	*	1121
Womac Oil Co., J. J. Perkins 8, blk 17	*	1504
BAYLOR COUNTY—		
Pet. Prod. Co., B. King 1, sec 2456	*	1561
COOKE COUNTY—		
Pet. Prod. Co., Andress 4	*	1462
Texas Co., T. Truenbach 3, blk 7	*	1582
THROCKMORTON COUNTY—		
E. B. Cochran et al, J. W. Taylor 1, sec 680	*	780
WICHITA COUNTY—		
G. G. Browning et al, J. L. Jackson 1, blk 13	*	755
L. T. Burns et al, 1st Nat'l Bank 5, sec 27	*	1774
1st Nat'l Bank 11, sec 26	*	747
1st Nat'l Bank 23-D, sec 26	5	1760
Fisher et al, J. A. Fisher 7, sec 15	*	780
Pet. Prod. Co., Munger 4, blk 31	*	1780
Texas Co., 1st Nat'l Bank 16, sec 26	18	466
YOUNG COUNTY—		
Jas. B. Baker et al, M. F. Wells 1, sec 206	*	780
Bridwell Oil Co., J. B. Daniel 4, sec 164	*	937
Moran & Wotolla Roy. Co., W. B. Howard 7, sec 3401	10	906
Mook-Texas Oil Co., Jefferies 1	55	4015
Rathke Oil Co., C. E. Graham 6, sec 3401	*	973
Logan 5, sec 2251	5	574
A. H. & S. P. Schmitt et al, R. O. Andrews 2, sec 1399	15	927
W. R. Stafford et al, W. E. Sullivan 2, sec 1918	*	588
Texas Co., Finch 6-B, sec 40	160	676

*Failures; †Junked; ¶Million cu. ft. gas.

Loma Novio Prospects Improved by Big Well

San Antonio, Texas.—Loma Novio field of Duval County takes on the aspect of a major producer with the newest completion flowing at an initial rate of nearly 50 barrels per hour through choke. Heretofore, the several producers averaged from 35 to 125 barrels per day initial production and would not flow.

Humble Oil & Refining Company's Mucio Vela 2, 660 feet east of No. 1, Section 42, gauged 49.6 barrels per hour through ¾-inch choke from 2792 feet. It showed 25 pounds working pressure on the tubing and 225 pounds pressure on the casing. It topped sand at 2773 feet. This sand is the basal member of the Government Wells series and is below the two sand lenses producing in the field by that name, located only two miles to the west.

Humble Oil & Refining Company, The Texas Company, Magnolia Petroleum Company and Frank Gravis each have an active rig in this field.

Continental Oil Company apparently has a good producer in the Government Wells sand in the Driscoll field. Clara Driscoll Sevier 4-A, Section 448, is waiting on cement at 3430 feet. At 3423-30 feet it showed 900 feet of oil, 50 pounds pressure in 20 minutes on a drill stem test.

Intrepid Oil Company's (E. R. Thomas) Parr Ranch 1, Section 26, seven miles northwest of San Diego, is a disappointment in the Pettus sand. At a total depth of 4851 feet, it tested salt water. It likely will be plugged back to the Government Wells horizon and casing perforated. This well showed for a possible producer on a test made by an electric formation tester.

W. L. Pearson et al's Fitzsimmons 1, Section 291, northeast of the above well, is coring at 4530 feet. It had the Government Wells sand at 3806-20 feet with an odor of oil and another sand at 4413 feet, also carrying an odor of oil.

South Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BASTROP COUNTY—		
Marts & Beavens, R. B. Rivers 2, 10,-300 ft swl, 1850 ft sel E. Standifer sur (Elgin)	*	2280
Nelson Puett, J. H. Carroll 2, A. Mays sur No. 19 (Carroll)	85	2214
BEE COUNTY—		
Mills Bennett, R. Harris 2, s nw sec 9 (W. Tuleta)	300	3931
Blanco Oil Co. & Al Buchanan, P. Perez 1-B, se sec 9 (W. Tuleta)	200	3956
Conroe Dr. Co., Hayden-Bruchaus 1, blk 4, sec 20 (W. Tuleta)	*	4011
Dirks Bros., Foley 1, 330 ft nl and wl Keeler sur, opens new pool	¶10-25	3445
R. N. Herod et al, Kimball 1, S. Winship sur, (Grayburg)	*	....
Edwin M. Jones, Skinner-Harris 1, e nw sec 10 (W. Tuleta)	300	3966
Mid-Continent Crude Oil Prod. Co., A. J. Kimball 2, S. Winship sur (Grayburg)	*	3555
Weiskettle et al, John R. Scott 1, 12,-500 ft sl, 24,800 ft el J. M. Uranga Gr	*	4502
DUVAL COUNTY—		
Humble, Mucio Vela 2, n sec 42 (Loma Novio)	1200	2792
Magnolia, Brennan-Benavides 7, blk 468, Hale sub, Arispe Gr, (Cole)	125	2803
Salt Dome Oil Co., L. B. Moody 4-B, ne nw sec 60 (Gov't Wells)	*	2384
Southwest Dr. Co., Wendt 17, se sec 43 (Gov't Wells)	300	2275
HIDALGO COUNTY—		
Alamo Dr. Co., F. B. Guerra 2, tr 254, por 40 (Samfordyce)	*	2125
King-Woods Oil Co., Osca Dascam 1, 215 ft el, 218 ft nl lot 23-A, blk 49, King-Woods sub, por 41	*	4368
Showers & Moncreif, Inc., J. Lawerence 3-B, tr 274, por 39 (Samfordyce)	500	2781
JIM HOGG COUNTY—		
The Texas Co., Duval School Land 1, 5740 ft sl, 6562 ft el sur 150	*	3298
KARNES COUNTY—		
American Liberty Oil Co., Belknap 1, 330 ft nwl and swl of tr, Chas Haynes sur (Burnell)	¶20	3436
LIVE OAK COUNTY—		
Berry & Hayes, C. L. Terrell Est 1, 1600 ft nl, 330 ft el of tr, Walter Henry sur	*	2258
McMULLEN COUNTY—		
Loma Oil Co., L. Jacob Corp. 104-A, W. H. Jacob sur No. 8 (Jacobs)	*	972
REFUGIO COUNTY—		
Humble, J. F. B. Heard 18, John Peoples sur (Greta)	400	4405
STARR COUNTY—		
E. L. Younkins, Kelsey Bass 1, 360 ft sl, 7 ft wl blk 19, B&B sub, por 87	*	2553

*Failures; †Junked; ¶Million cu. ft. gas.

Sinton Extension Well Does Not Flow

San Antonio, Texas.—Heep Oil Corporation's Welder 1-B, Portillo Survey, one mile south of Sinton field production in San Patricio County, is an oil producer, but will not flow. Attempts to flow with valves and gas injection did not bring about satisfactory flow and the test likely will be put on pump. It has sand at 5445-49 feet and is showing considerable 38 gravity oil.

Heep Oil Corporation has made two offset locations on the same tract, one of which is to be drilled immediately upon the completion of this test.

Plymouth Oil Company's Welder 2-B drilled to 6854 feet, ran an electric formation tester and plugged back to 5100 feet. It now is drilling at 5335 feet in sidetracked hole and will be completed in the regular 5400-foot sand as a gasser spraying distillate.

Several miles southwest of the field, Stanolind Oil & Gas Company's J. J. McMillan 1, wildcat in the P. Fitzsimmons Survey, is drilling at 3100 feet.

Humble Oil & Refining Company's prospect west of the Angelita field, same county, is drilling at 5315 feet. It is 6000 feet west of the discovery well, the only other producer in the field.

Sandia Well Makes Oil and Salt Water

San Antonio, Texas.—O. W. Killam's W. D. Wade 4, deep test in the Sandia field, Jim Wells County, was reported to be flowing some oil and a limited quantity of salt water late in the week. The test was brought in February 12 for 50 barrels an hour through ¼-inch choke, but went to salt water when larger chokes were used. It has been re-worked in an effort to cut off the water.

The test is located in Block D, S. A. Agua Dulce Survey and is near several 2900-foot gassers. The sand in this producer was found at 4022.5-28 feet and casing set at 4025 feet.

Burnell Field Is Extended Northward

San Antonio, Texas.—Another extension for the Burnell field, Karnes County, was provided last week when American Liberty Oil Company's Ida Herder 1 showed for a gasser. It is in the east corner of 215.75-acre tract No. 4, Johnson Survey, one half mile northwest of production. The well topped the sand seven feet lower than the discovery test and showed 450 pounds pressure in five minutes.

American Liberty Oil Company's Belknap, Haynes Survey, nearly a mile northeast of Thompson's Russell 1 gasser, has been completed for a large gasser showing 1100 pounds pressure. Sand was cored at 3431-36 feet. It also provides an extension.

Marr & Norton's M. E. Choate 3, south of these gassers, is drilling at 2785 feet.

Frio County

San Antonio, Texas.—One Frio County wildcat was in process of completion and the second was testing a sand which gave promise of making some sort of producer. They are the only drilling wells in the county.

Amerada Petroleum Corporation's Halff & Oppenheimer 3, five miles southwest of Pearsall, made salt water at 3933 feet, plugged back to the casing at 3916 feet and re-drilled to 3921 feet,

where it is in process of completion. This well had flowed at the rate of 270 barrels per day through two-inch drill stem at 3929 feet. Deepened to increase production, it went to salt water.

Shoemaker et al's Roach Estate 1, C. Wentzel Survey, in the Bigfoot area in the extreme northeastern portion of the county, has a sand at 2365-71 feet and is preparing to make a drill stem test. The cores were colored, contained an odor and were gassy.

Second Hidalgo Pool May Be Opened

San Antonio, Texas.—W. L. Cleary et al's Brock & Showers 1, five miles southwest of Monte Christi in Hidalgo County, may open Hidalgo County's second oil field. Late in the week, preparations were being made to run a drill stem test of the sand cored at 3048-56 feet. The sand had been cored a week prior to this time, but the well was shut down.

The well is in the northeast corner of Lot 8, Block 9, Vista Hermosa subdivision, Porcion 80, and is about 12 miles northeast of the Samfordyce field.

One oil producer was completed in the Samfordyce field during the week. Showers & Moncrief, Inc.'s John Lawrence 3-B, Tract 274, Porcion 39, flowed 16 barrels per hour through ¼-inch choke from 2781 feet. Gas sand was cored at 2757-73 feet, and oil at 2773-81 feet. A shale break of several inches was found between the two sands.

Several producers are in process of completion. Cortez Oil Company's C. E. Smith 3, Tract 278, Porcion 41, 2760 feet; Gem Oil Company's Seabury et al 1, Tract 256, Porcion 38, 2776 feet; Navarro Oil Company's Seabury 3, Tract 256, Porcion 38, total depth of 2772 feet, but at new total depth of 2764 feet in sidetracked hole; Windsor Oil Company's Dr. J. M. Doss 2, Tract 278, Porcion 40, 2758 feet. All are drilling plugs.

Carroll Pool

San Antonio, Texas.—Nelson Puett's J. H. Carroll 2, in the Carroll pool, Bastrop County, is the best producer thus far completed in that immediate area. It is flowing 85 barrels of oil per day at 2214 feet. Cap was cored from 2166-76 feet, Dale lime 2176-2198 feet, tight serpentine from 2194-2214 feet. A string of five-inch casing was set to 2173 feet. It is located 300 feet east of Puett's Carroll 1, A. Mays Survey, the discovery well.

Recent Strikes Cause Bee County Activity Increase

San Antonio, Texas.—An active wildcatting campaign is following the several recent discoveries in Bee County. A number of blocks are being assembled, and considerable scattered acreage is being purchased.

The activity is following the several well defined strikes through the county with new wildcats being spotted up and down these fault zones in effort to open additional small producing spots, which are rapidly increasing in number. Every one of these trends seem to afford a number of producing areas, limited in size, but situated from a mile to three miles apart.

West Tuleta, Dirks, Caesar, Dirks Brothers' Foley strike, and several wildcats showing for probable production, have been responsible for the enthusiasm. West Tuleta field will likely embrace 800 acres, Caesar may be a little larger. The two Dirks' strikes still are unknown quantities with only one producer drilled in each, that being the discovery well.

The new Dirks field comes in for its development. Navarro Oil Company has started up on Roth 1, due south offset to the discovery. Kirby Petroleum Company purchased 50 acres out of the D. A. Barber tract, H. L. Williams Survey for $600 per acre, one third cash and the rest oil. Navarro Oil Company bought 84 acres out of the SW Section 7, paying $400 cash, $600 out of oil per acre for half of it and $350 cash and $500 out of oil for the other half. Mills Bennett completed a deal for 80 acres out of the NW Section 7, paying $350 and $500 per acre for 40 acres and $300 and $500 for another 40 acres. In addition, there was a brokerage fee. These trades will bring about immediate drilling.

Dirks Brothers are negotiating for the sale of the gas from the Foley 1, wildcat producer which several days ago opened a new field in the western portion of Bee County. The well is in the Keeler Survey, 1½ miles northwest of the Friendship area, at 3404-45 feet, it produced about 25 barrels of high gravity oil and a large amount of gas per day through ¼-inch choke, showing 1000 pounds tubing pressure and 1250 pounds casing pressure. If the deal is completed, the oil will be stripped from the gas.

Tex-La Oil Company (Salt Dome Oil Company) likely will drill a well shortly on its 60-acre lease in the R. Jones Survey, purchased for $100 cash and $100 out of oil per acre.

Several completions were reported in the West Tuleta field. Mills Bennett's R. Harris 2, NW Section 9, is good for 12 barrels per hour through ¼-inch choke, showing 140 pounds tubing pressure and 450 pounds casing pressure. Pettus sand was topped at 3880, casing set at 3923 feet and hole bottomed at 3931 feet. Blanco Oil Company & Al Buchanan's P. Perez 1-B, SW SE Section 9, made 80 barrels per day through 3/16 choke from 3950-56 feet in sand. Edwin M. Jones' Skinner Harris 1, NE NW Section 10, has been completed for eight barrels per hour through ¼-inch choke at 3966 feet. It is showing 1000 pounds tubing pressure and 1250 pounds casing pressure. Several more wells are on the sand and are ready to be completed.

Conroe Drilling Company abandoned Hayden-Bruchaus 1, Block 4, SW Section 20. It topped the Pettus sand at 3953 feet, showed gas and some oil to 3988 feet, but was carried to its total depth of 4011 feet. At 3994-4011 feet, it tested 13 thribles of salt water.

K. F. Hasselman apparently has extended the Cole sand production more than a mile to the southwest through the completion of Sparrow 1, Block 4, NE Section 20. It has a depth of 4042 feet with casing set to total depth. Perforated at 3969-74 feet in the Pettus sand, it developed salt water and some oil. Plugged back and perforated at 3115-37 feet, it is flowing about one barrel of oil per hour. Forty more holes are to be put into the casing with a gun perforator to increase the output.

Caesar field comes in for an interesting play with considerable work pending along the strike line northeast and southwest of production. Two wells are in process of completion. Caesar Oil Company drilled to about 3044 feet in R. E. Miller 3, F. Lewis Survey, has set and cemented a full string of casing and will perforate opposite the oil sand. El Toro Oil Company's Gardner 1, about midway between the oil production and the Caesar townsite, cored the Pettus sand, showed 49 joints of oil and 20 pounds pressure in 10 minutes and set casing.

Houston.—Jack Frazier's Sternenberg 1, is located 1325 feet north of the south line and 400 feet west of the east line of Survey, John Pearson Survey, Hardin County.

Eureka Test Has Reached 7712 Feet

Houston. — In the Eureka area of Harris County, Means & McGhee's Laura Lackner 1, 3500 feet northwest of the discovery well, H. Rienerman Survey, was preparing to ream at 7712 feet at the close of the week.

On attempted drill stem test from 7657 to 7677 feet the tool slipped and the test showed 14 thribbles of mud, no showing of oil or gas and no pressure. The test was made through a quarter-inch choke and was open five minutes.

It is interesting to note that Laura Lackner 1 is supposed to be running higher on the paleontological markers as compared to the discovery well yet now is down below the producing horizon that was discovered by C. B. Bunte's Laura Lackner 1. Means & McGhee's Laura Lackner 1, now is in the Upper Saline Bayou having topped that formation at 7585 feet and the discovery well did not penetrate the Upper Saline Bayou. It topped the Cockfield at 7439 feet and drilled in that formation 256 feet and came in as a gas well. It is the opinion of some that a faulty condition exists and the opinion of many that the sands were not logged. The geophysical markers was worked by 10 operators in the discovery well.

The same operator's Neuhaus 1, quarter mile southwest of the discovery well, Wm. P. Morton Survey, is drilling at 7540 feet and topped the Cockfield at 7410 feet and compared to Means & McGhee's Laura Lackner 1, is running about normal and as compared to the discovery well is running a little higher.

Texas Gulf Coast Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARRIOLA—		
Republic Prod. Co., Arriola 3-X	750	3241
Arriola 9	612	4423
BARBERS HILL—		
The Texas Co., J. F. Wilburn 10	430	4838
Yount-Lee Oil Co., Chambers 27	335	4513
ESPERSON—		
General Crude Oil Co., Moores Bluff 15	¶6	4088
GOOSE CREEK—		
Humble O&R Co., Simms Smith 80	*	6855
KITTRELL—		
Sun Oil Co., L. W. Huffman 1	*	2155
LOUISE—		
Pure Oil Co., C. T. Kountz 3	336	5168
MARKHAM—		
Hamil & Hamil, Hudson 2	*	3763
Harry Mallard, Smith 1	5	936
PIERCE JUNCTION—		
Navarro Oil Co., Cain A-3	350	6323
PORT NECHES—		
The Texas Co., Polk 3-B	*	5933
RACCOON BEND—		
Humble O&R Co., Woodley 11-X	*	7068
Payne 15	1560	4112
THOMPSON—		
Gulf Prod. Co., Hamerstrom 7	1488	5360
HOUSTON COUNTY—		
Resource Prod. Co., Smith Bros. 1, 2478 ft fr n, 1402 ft from sw line of J. H. Cummings sur	*	2500
POLK COUNTY—		
C. & C. Drlg. Co., Granburry & Smith 1, Wm. Shadburn sur	*	4545
TRINITY COUNTY—		
Marrs & McLaughlin, R. White 1, 250 vrs fr n, 263 vrs fr e line on 56-ac tr in W. F. Goff sur	*	1140
WALKER COUNTY—		
Seaport Oil Co., Ross 1, 256 ft n of s line, 337 ft w of e line of tr in Wm. Hodge sur	*	5012

*Failures; †Junked; ¶Million cu. ft. gas.

Dickinson Field

Houston.—Humble Oil & Refining Company's A. F. Danielson 1, 2500 feet southeast of the discovery well, Dickinson area, J. Sellers Survey, Galveston County, was drilling ahead below 8335 feet in rock at the close of the week. It makes the Dickinson field appear discouraging. It is considered the highest well in the field and now is drilling approximately 550 feet below the producing horizon for the field. It is reported that on a core from 8275 to 8295 feet the well had a showing of oil with a salty taste.

The well now is through the producing horizon for the field and it is reported that it will be carried on down to explore deeper formations.

The same operator's W. J. Jones 1, 3000 feet northwest of the discovery well, J. S. Sherman Survey, was down to 7035 feet at the end of the week and E. Schaffer 1, 3500 feet west of the discovery well was drilling at 7842 feet and should reach the producing horizon the coming week.

Washington County

Houston.—A new wildcat location has been announced by Arkansas Fuel Oil Company in Washington County. It will be drilled in the J. D. Miller Survey on a 65-acre tract, 100 feet south of the center of the tract. The well is located approximately three and one half miles northwest of Burton.

Port Neches

Houston. — The Texas Company's Polk 3-B, Port Neches, Orange County, was abandoned at 5933 feet after failing to make a producer out of it with gas and circulating with oil. This well was the second well to be abandoned in the new Marginulina sand that was discovered by Polk 2-B.

Walker County

Houston. — Seaport Oil Company's Ross 1, nine miles west of Huntsville, Wm. Hodge Survey, Walker County, was abandoned during the past week at 5012 feet. It topped the Cockfield at 2449 feet.

Deeper Pay Found At Pierce Junction

Houston.—Navarro Oil Company's Cain 3, a workover in the Pierce Junction field, Harris County, was drilled deeper to 6323 feet and discovered a new producing horizon for the old field during the past week.

The old total depth was 4563 feet and the hole was deepened to 6323 feet in the Vicksburg formation and came in for 350 barrels of pipe line oil per day. Gravity of the oil was 35 degrees at 78 degrees temperature but the temperature had declined to 60 degrees at the close of the week. The drill pipe was stuck at 6323 feet and the oil flow was through a one eighth-inch choke. The operators were in the Vicksburg at 6100 feet where the last samples was taken from the well.

The well is located 50 feet from the west line and 75 feet from the south line of "A" lease in J. Hamilton Survey. It was completed on May 12, 1935, for a 150-barrel pumper from 4563 feet.

Wharton County

Houston. — Another producer was added to the Louise field of Wharton County, when Pure Oil Company completed C. T. Kountz 3, for 336 barrels per day from 5168 feet. The flow was through a quarter-inch choke with a tubing pressure of 404 pounds.

Goose Creek

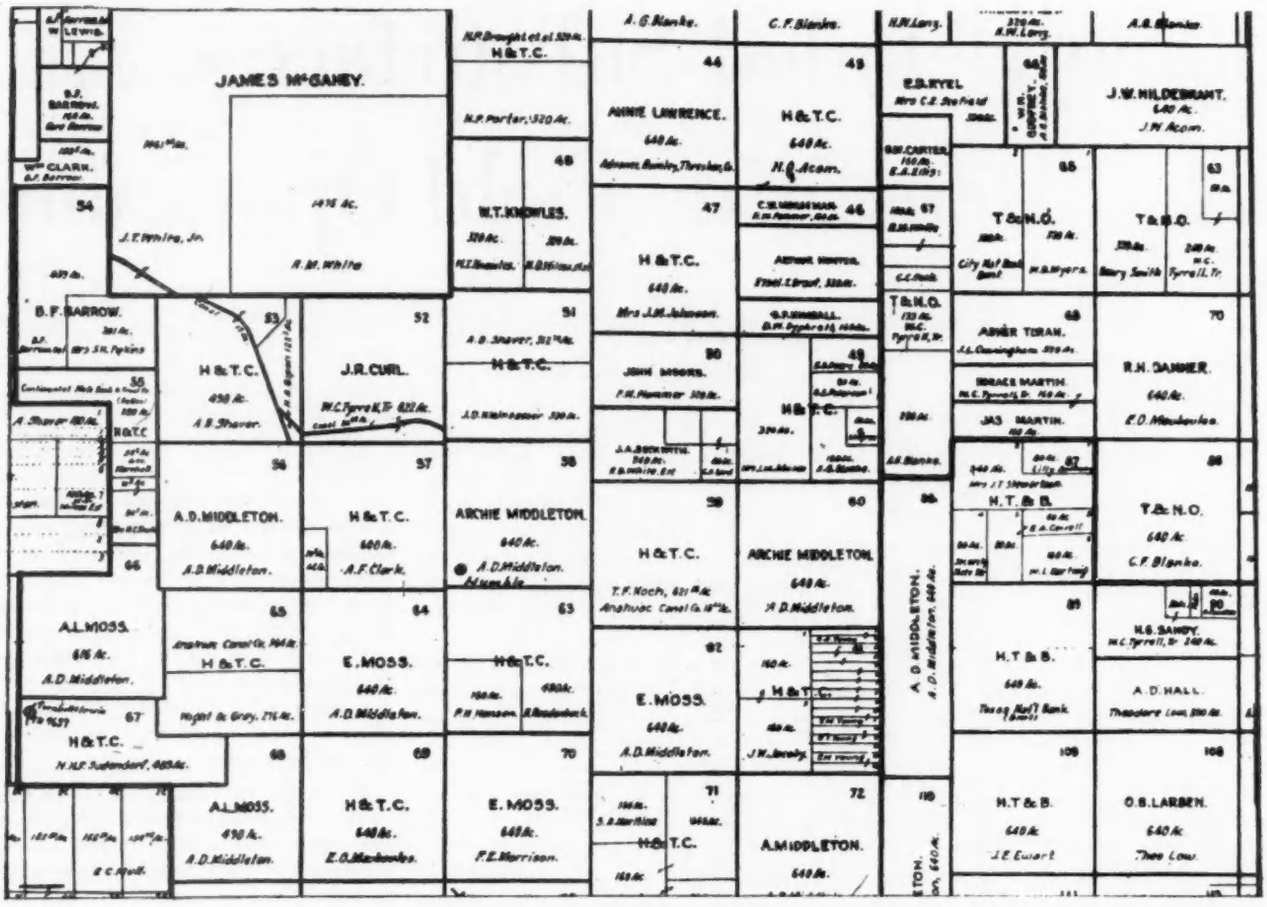
Houston. — Humble Oil & Refining Company's Simms Smith 80, Goose Creek field, W. Scott Survey, Harris County, was abandoned at 6855 feet at the close of the week after failing to get through the heaving shale.

Chambers County

Houston.—South Gulf Oil Corporation has made location for a wildcat on the R. M. White 479.7-acre tract in the Luke Bryan Survey, Chambers County. It is 466 feet out of the northwest corner of the tract. At the close of the week the operators were moving in material to drill 7000 feet on the wildcat.

This test will be interesting to watch as it is the first well drilled in the Turtle Bay district since the exciting lease play started some time ago. The wildcat is approximately six miles northwest of Humble Oil & Refining Company's A. Middleton 1, H. & T. C. Survey, Section 58, which has indications of becoming the discovery well for a new pool in Chambers County.

The well is being drilled on a structure worked out by the Salt Dome Oil Corporation.



Anahuac Area, Chambers County on Texas Gulf Coast

—Map Courtesy Gulf Coast Engineering Company

Chambers County Well May Open New Field

Houston.—Humble Oil & Refining Company apparently has discovered another Gulf Coast oil field; its A. Middleton 1 having showed 6900 feet of high gravity oil on a 10-minute drill stem test.

The drill stem test was made from 7024 to 7050 feet, through a three eighths-inch choke on bottom and a quarter-inch on top. The Discorbis was topped at 5840 feet and the Frio at 6999 feet, where the well was first reported showing oil. Seven-inch casing was set at 7027 feet. At the close of the week the operators were preparing to drill plugs and make a production test.

Humble Oil & Refining Company's A. Middleton 1 is located approximately six miles east of Anahuac, in Chambers County, 466 feet out of the southwest corner of the H. & T. C. Survey, Section 58. The well is about three or four miles northeast of Turnbull & Irwin's Sudindrof 1, H. & T. C. Survey, Section 67, which was dry. Upon comparison of the two wells, A. Middleton was running from 500 to 600 feet higher. Sudindrof 1 topped Discorbis at 6432 feet and A. Middleton 1 encountered the formation at 5840 feet. The latter well was reported to have topped the Discorbis at 5880 feet several weeks ago but was corrected back to 5840 feet. On the Frio marker Sudindrof 1 topped the formation at 7606 feet and A. Middleton 1 got it at 6999 feet, showing a high around 600 feet. Heterostegina was topped in Middleton 1, at 6240 feet. Elevation is 30 feet.

Turnbull & Irwin's Sudindrof 1 cored from 7448 to 7452 feet, which showed two feet of sand and two feet of shale with a salty test, indicating it might be a flank test.

If this well proves a commercial producer, which it has indicated, it will be the first major strike since the Conroe-Tomball fields of Montgomery and Harris Counties, according to those informed in the oil industry.

Humble Oil & Refining Company controls around 15 sections in the area. It was reported some time ago that Humble Oil & Refining Company had a geophysical option on 20,000 acres to the east of Anahuac and had leased H. & T. C. Survey, Section 56. The operators did reflection work in the area along with Shell Petroleum Corporation, Sun Oil Company, Yount-Lee Oil Company and Amerada Petroleum Corporation. The latter five companies did geophysical work in 1934.

Humble Oil & Refining Company purchased a portion of the area in mineral fee. It is reported to hold mineral interest on a quarter of the A. Middleton fee, which is H. & T. C. Survey, Section 56, 58, 62, 64. Also part of D. L. Brum's interest in Section 63, and W. C. Tyrell, Section 52, 57, and 65.

It was reported the latter part of June, 1934, that Sun Oil Company had been assigned 3949 acres by D. A. Middleton. The acreage being all H. & T. C. Survey, Section 76 and 74 and all J. B. Murray Survey, but the east 252 acres, H. & T. C. Survey, Section 80 and 82 and some part out of the east part of J. B. Murray Survey. Sun Oil Company worked the area with reflection instruments.

Turnbull & Irwin has 3200 acres around Sudindrof 1, which was abandoned at 7937 feet, Shell Petroleum Corporation, Gulf Production Company and Stanolind Oil & Gas Company had 250, 350 and 350 acres, respectively.

Bosco Detailed Subsurface *Geological Data Are* Benefiting Field Operations

CHARLES LEYENDECKER
Staff Representative

THE Bosco field of Acadia and St. Landry Parishes, Louisiana, is believed to have had more detailed geological information compiled than ever before witnessed on the Gulf Coast in such a short period of time.

The field is being developed with the greatest degree of accuracy to determine the geological formations and define the faults that may exist.

Superior Oil Producing Company, sole developer of the field, has made a detailed study of conditions in the field and has used nearly every device known in the oil industry to determine subsurface conditions.

The first geophysical data was compiled by The Pure Oil Company, who worked the area with refraction seismograph in 1929, and later checked with torsion balance. It is interesting to note how well the field now compares to the geophysical pictures made before the field was discovered. The first well drilled on the prospect was converted into a discovery well and the following wells to be completed were drilled entirely on the picture and worked out with great satisfaction to the operators. Upon completion of the discovery well, Superior Oil Producing Company made six additional locations for exploratory tests in all directions from the discovery site, ranging from half mile to 1¼ miles.

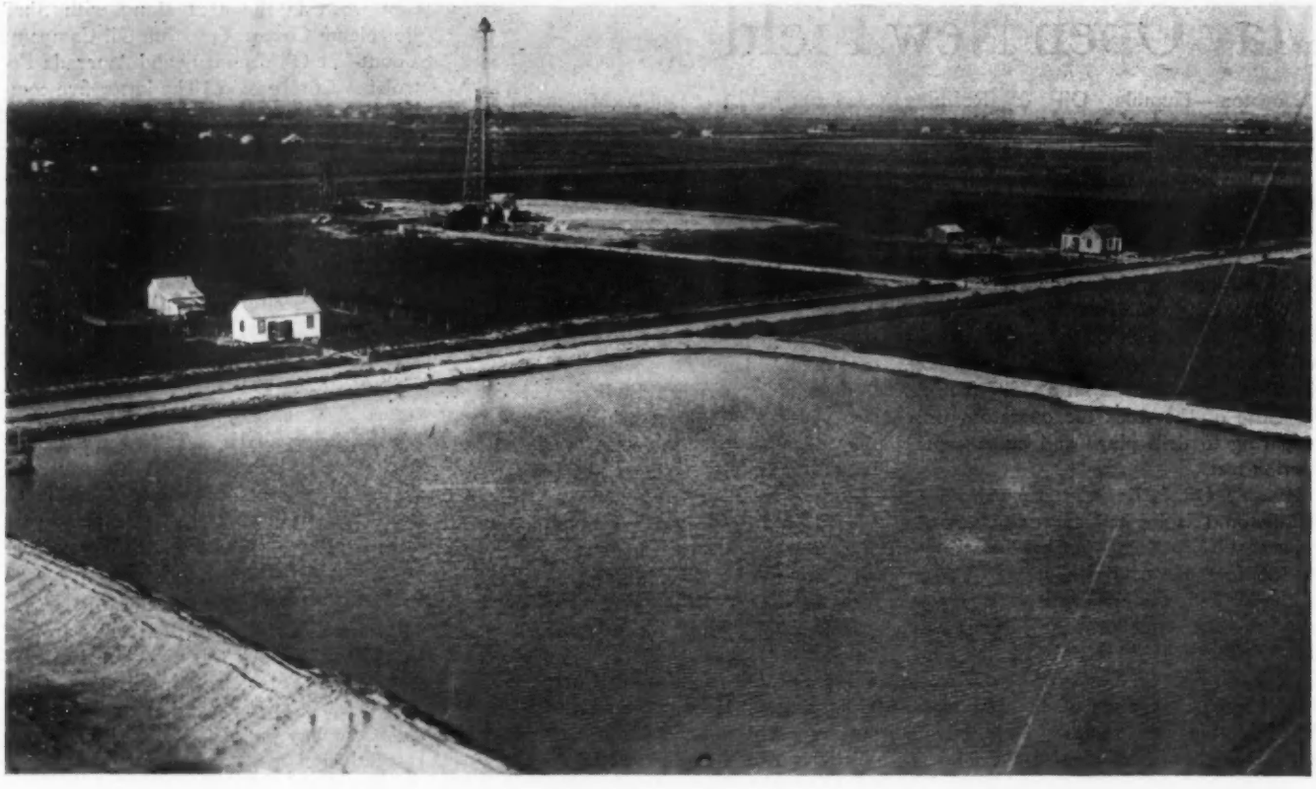
These first seven tests and the information obtained, enabled the operators to approximate the limits of the field, however the exploratory test to the southwest of the discovery well was junked and abandoned. Therefore, the company did not receive information sufficient to suspend drilling in that direction, and since the abandonment of the well another test was put down that proved to be a commercial producer.

Upon completion of the above six exploratory tests, eight additional inside locations were made and now all these are producing oil.

An electrical logging device has played a major part in determining geological conditions at Bosco. Prior to running the final string of casing before completion, the device is run to the bottom of the hole and after withdrawing the device slowly from the hole, two graphs are made. These record the possible conditions of the hole and give engineers information as to where to set the final string of casing.

Not only has the electrical logging device played an important phase in the area, but the drillers log and accurate coring have been of major importance to the operators and have been beneficial to recheck with the electrical device's graph, which upon comparison shows to check out exactly.

From an analysis of these graphs and other geological and engineering data



A fresh water supply has been constructed to assure sufficient water for conducting field operations

obtained from cores it is possible to determine the depth and probable character and content of sub-surface formations.

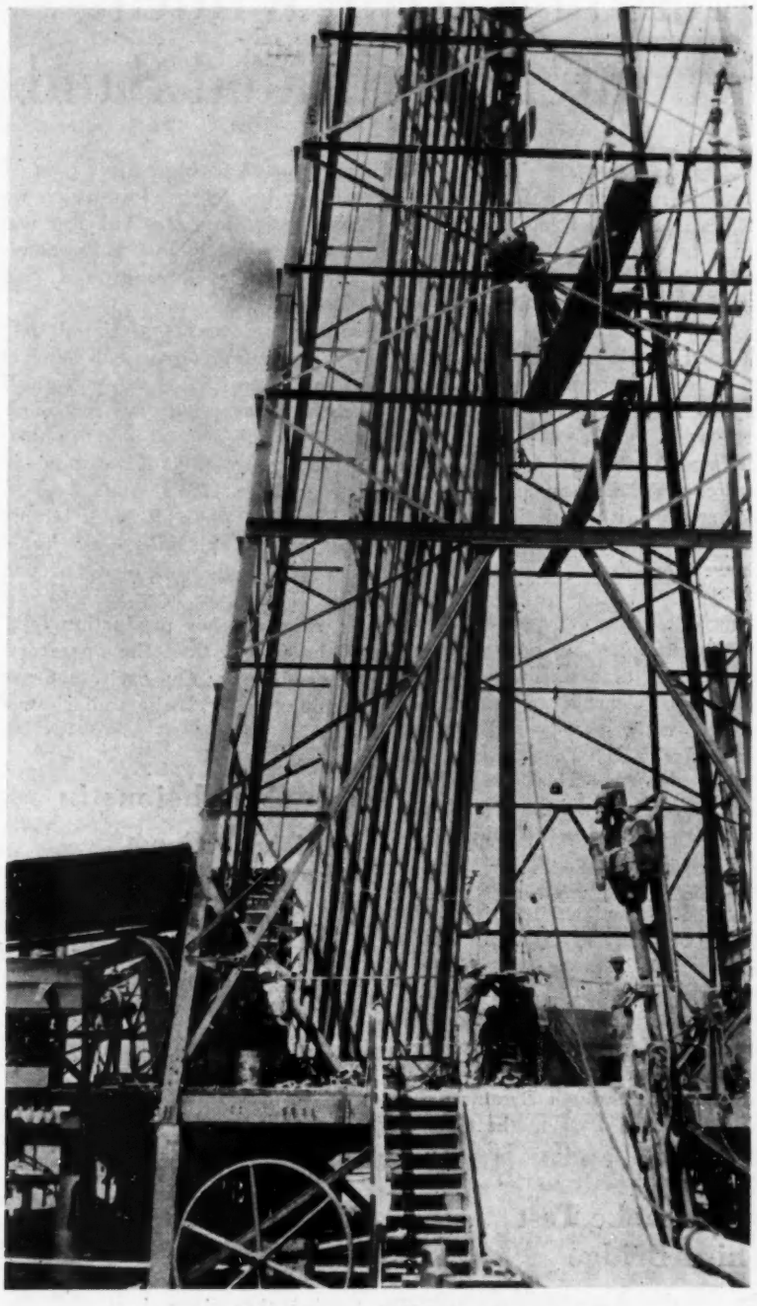
There are three producing sands in the Bosco field: the Discorbis, which is referred to as the Hernandez sand, named after the discovery well; Heterostegina sand, called the Mire sand, so named after the first eastern producer; and the second Marginulina sand, often called the Richard sand because it was the first southeastern producer. The producing sands are encountered around 7830 feet, 8060 feet and from 8600 to 8687 feet, respectively. A gas sand is found around 8425 feet.

From the surface to approximately 7600 feet, the base of the Miocene and top of the Oligocene, which is the Discorbis, is a soft formation with sand and shell with sand predominating. The Vicksburg was encountered in A. Martinez 1, the farthest east and south test, at 9700 feet. This test was drilled to 10,005 feet and was abandoned at that depth in the Vicksburg, having some 305 feet of that formation. This well also was the deepest well to ever be drilled in the Gulf Coast.

Production from the Discorbis comes from the base of the formation and the water level is found around 7870 feet. At present there are 13 wells in the field producing from this formation. Production from the Heterostegina sand is found about 60 feet below the top of the formation. To date there are two wells producing from the Mire or Heterostegina sand. Production from the Marginulina sand is found about 190 feet below the top of the horizon, and 10 wells are producing from this formation. There are two sands, approximately 390 feet below the top of the Marginulina, that have been untested and another about 50 feet below the last mentioned depth.

Production from the Discorbis is more prominent to the north and east of the discovery well, with six tests averaging 1000 feet apart in a straight line running east and west producing from this formation. Heterostegina production is from more to the west and little south of the discovery well. Marginulina production is found more to the south and southeast of the discovery well.

It is thought that several faults exist in the field but to date these faults have not been defined, however the operators have a good idea where they lie. One of the faults is supposed to lie in the area of Leo Kahn 1, which was abandoned at 7745 feet, and O. Malancon 1, which was completed as a commercial oil producer at 8620 feet in the Marginulina. Another fault is reported on the E. Comeaux lease, which is in the east central part of the field. Three wells have been drilled on the lease, one being an oil well, one an abandonment and the other a gas well. The lease is surrounded by producers. Comeaux 1 is producing from the Discorbis, Comeaux 2 found salt water in the Marginulina at 8798 and 8901 feet and Comeaux 3 was completed in the Heterostegina at 8070 feet for a gas well.



Running 7860 feet of 9⅝-inch casing at Bosco

The Bosco field was a major discovery in 1934 and has proved a major development in the Gulf Coast area. Not yet a year old, the field has been developed at a rapid pace and has proved that deep production can be produced on economical bases. The Bosco field gives the geological fraternity some interesting facts on deep drilling in the Gulf Coast.

The Bosco field originally was discovered by Pure Oil Company, who did refraction seismograph work in the area in 1929. Due to expiration dates on some of the leases Pure Oil Company entered into an arrangement with Superior Oil Producing Company to explore and develop the 6500-acre block. Superior Oil Producing Company drilled P. O. Hernandez 1 on the geographical center of the block and it was brought in April 29, 1934, for a large producer of high gravity oil at 7848 feet.

Jefferson Parish Wildcat Encounters Saturated Sand

Lake Charles, La.—The Texas Company encountered over 10 feet of saturated oil sand in St. Denis 1, approximately six miles southeast of Lafitte, Jefferson Parish.

The hole was bottomed at 5137 feet, and on a core from 5094 to 5107 feet it showed sandy shale showing oil. From 5107 to 5114 feet streaks of shale, from 5114 to 5127 feet sandy shale and a fair showing of oil, and from 5127 to 5137 feet 10 feet of saturated oil sand. Another core was taken and showed salt water, after which it was decided to deepen the well to the Oligocene formation. The shows were in the Miocene formation.

This area has been worked with geophysical instruments by several major companies from time to time. Gaither Jones, Houston independent operator, took 16,000 acres in the vicinity and consummated a deal with The Texas Company to do geophysical work on his block. After the work was done a selection price was paid on 5000 or 6000 acres, Gaither Jones retaining a one forty eighth override.

The structure is regarded as a deep seated salt dome and was discovered by The Texas Company in 1933 with reflection seismograph instruments.

The wildcat is located 20,297 feet south, 4853 feet east of the NWc 19-17s-24e. It is located 2100 feet west of the government canal which connects with Bayou Dupont and runs through Barataria Bay out through Grand Pass to the Gulf of Mexico.

Deep Roanoke Test Washing Bridge

Lake Charles, La.—Shell Petroleum Corporation's Jarnigan 1, 660 feet due east of the discovery well, Section 12-9s-4w, was being prepared to wash over bridge around 5000 feet at the close of the week. The bottom of the hole is 10,001 feet where a showing of gas was encountered.

When the well blew out the hole bridged and lost circulation. After a special cementing truck was called in, which pumped 1650 sacks of special drilling mud into the hole, it restored circulation by putting a 3400-pound pressure on the pumps. It was later found out that the top of the bridge was around 5000 feet.

This well is the second 10,000-foot test for the Gulf Coast and is the deepest test in the area to show gas. The hole started to blow after going into a soft sand at 9999½ feet which was the Frio formation. To kill the well the operators had to mix a 14-pound mud. The operators have around 2700 feet of open hole.

The same operators completed Kratzer 2, 440 feet north and 440 feet east of the SWc NW 12-9s-4w, for 825 barrels per day from 7807 feet. The flow was through a quarter inch choke with a tubing pressure of 1090 pounds; casing pressure 1275 pounds.

Humble Oil & Refining Company's Devilbiss 3, one mile southwest of the discovery well, was being prepared to plug back again from 9318 to 9216 feet to make another production test. This is the fourth time the operators have plugged back. On each test previous to plugging back the well showed salt water.

Ten Completions in Louisiana Coast

Lake Charles, La.—Of the ten completions reported along the Louisiana Gulf Coast during the past week only two resulted in failures. The eight producers yielded 3191 barrels per day.

Fourth Gillis Well Completed

Lake Charles, La.—The fourth producer was added to the new Gillis field of Calcasieu Parish when Union Sulphur Company completed Powell Lumber Company for 540 barrels of pipe line oil per day from 6743 feet.

The hole was carried to 6743 feet after topping the oil sand at 6737 feet and where six and five eighths-inch casing was set. The operators set one joint of 4½-inch, 80-mesh screen, three joints of blank and hung 2½-inch tubing at 6556 feet. The flow on the first 24-hour gauge was 540 barrels of 35.4 gravity oil on a quarter-inch choke. Tubing pressure registered 1600 pounds and the temperature was 46 degrees.

Since the completion of this well and the completion of Fohs Oil Company's Castle 1, to extend the field one mile south, Union Sulphur Company has made location for Barbe 3, 396 feet north and 329 feet west of SEc NE 11-9s-8w, being 500 feet north of the discovery well. The same operator's Castle 2, is located 1021 feet east and 330 feet north of the SWc NE 13-9s-8w, being 500 feet north of Fohs Oil Company's Castle 3. The same operator's Mayo Reeves 1, 105 feet north and 318 feet east of the SWc NW 12-9s-8w, being 750 feet northeast of the discovery well.

The next well slated for completion in the Gillis field is Union Sulphur Company's State 2, southeast of the discovery well. At the close of the week the operators were down to 6704 feet and had topped a gas sand at 6701 feet.

Crowley Field

Lake Charles, La. — Humble Oil & Refining Company's Rice Milling Company 1, south of Crowley field, Acadia Parish, Section 27-10s-2e, was coring shale at 8371 feet at the close of the week.

This wildcat has had shows of oil and gas from 5650 feet to the present depth. An odor of gas was found from 8187 to 8190 feet in a sand and shale section. Another good gas and oil show from 8190 to 8192 feet.

Angelina County Test Causes Greater Activity

Houston.—A greater amount of activity is taking place around E. B. La Rue's W. D. Ivey 1, near Huntington, Scarbrough Survey, Angelina County, where it was reported that the operators had a showing of oil from 1460 to 1464 feet. The showing was in the Queen City.

In this part of the county, past reports show it is customary to encounter shows of oil in different horizons between 1100 and 2500 feet. With the showing in the above well an exciting lease play has been in progress since the well has been shut down at 1464 feet. Two major companies are reported adding acreage to their already large spreads. It also is reported that the operators are buying royalty in the area. The 7½-acre tract, offsetting the Ivey well to the west sold for $150 cash. It is reported La Rue is paying $10 per acre cash for town lots in the town of Huntington. Small tracts around the La Rue well are bringing from $15 to $25 per acre cash.

Lee-Tex Oil Company has made location for A. H. Geisler 1, 7100 feet south of the north line, 220 feet east of the west line in the Burrell J. Thompson Survey, Angelina County and at the end of the week the operators were moving in material.

Three miles east of Diboll, a drilling block is being assembled around the Jose Marine Survey. At the present time the operators have assembled approximately 2000 acres.

Bosco Field Is Extended Southwest

Lake Charles, La.—The Bosco field of Acadia and St. Landry parishes was extended 1500 feet southwest when Superior Oil Producing Company completed M. Kahn 2.

The operators topped the Mire oil sand at 8720 feet and set seven-inch casing at that depth and 2½-inch tubing at 8517 feet. The well came in flowing 303 barrels on the first 24-hour gauge through a 10/64-inch choke with a tubing pressure of 800 pounds; casing 1250 pounds. Along with the pipe line oil the well made 175,000 cubic feet of gas. Bottom of the hole is 8733 feet.

The well is located 750 feet northwest of Kahn 1, which was junked and abandoned at 7745 feet and is 2563 feet north, 1000 feet west of the southeast corner of section 33-8s-3e.

The test spudded in on December 12, 1934, and topped the Discorbis at 7762 feet, Epondeiz 7838, Large Discorbis 7941, Heterostegina 8111 and the Mire sand at 8721 feet.

The same operators also finished Allemonde 1, approximately 1000 feet south of E. La Blanc 1, for 426 barrels per day from the Mire sand or second Marginulina sand topped at 8617 feet. Bottom of the hole is 8637 feet.

Three New North Louisiana Tests; More Blocking

Shreveport, La.—Three new locations were added to North Louisiana drilling reports last week and two old locations were abandoned. In the shallow Bellevue field, Bossier Parish, O. F. Shaver, Trustee's J. W. Elston 5, SE SE 10-19n-11w, has set 10-inch casing at 94 feet, six-inch at 307 feet and logged top of the Nacatosh sand at 312 feet and has drilled five feet into the sand. The Nacatosh at the 300-400-foot level is the main oil producing horizon in Bellevue.

In the Pine Island field, Caddo Parish, Hillman and associates have rig for J. S. Noel Estate 1, Section 12-20n-16w.

Three miles northeast of the small Holly field, De Soto Parish, that has five wells producing from the 2800-foot horizon, G. O. Collins of Kingston, has assembled a block of acreage and run derrick pattern for J. H. Riggs 1, NE SW 21-14n-13w.

Watson and associates of Homer have assembled a 5000-acre block of wildcat acreage in the south half of township 20 north, range 7 west, Claiborne Parish, for a contemplated 4500-foot test.

Monte Oil Company has abandoned location for J. H. Nattin 1, NE SW 15-22n-14w, Bossier Parish, where derrick was erected several months ago. Murray Oil Company has abandoned location for J. S. Noel 1, NW SW 15-20n-15w, in the Pine Island field, Caddo Parish.

North Area Leads In Louisiana Permits

Shreveport, La.—Ten of the 15 permits issued last week by the minerals division Louisiana Conservation Commission were for new tests in North Louisiana. The North Louisiana permits were divided among the following parishes: Bossier, one; Caddo, three; Claiborne, one; De Soto, two; Rapides, one, and Sabine, two.

The five for Gulf Coastal Louisiana were divided between Cameron Parish with two and Iberia Parish with three new tests.

DeSoto Parish Gas Blowout Is Killed

Shreveport, La.—Century Oil and Drilling Company has killed a gas blowout which had a spray of salt water from Tokio at 2821-25 feet in J. M. Norton 1, SW SE 27-11n-14w, DeSoto Parish, a wildcat, five miles southwest of the old Spider field, and has cemented six-inch casing at 2810 feet. Chalk was logged in this well from 1208 to 1795 feet; elevation is 244 feet.

In the same parish another wildcat, Dempsey and Manziel's Thigpen 1, NE SW NE 33-13n-13w, has been standardized at 1745 feet in chalk, and is pumping oil and water

Offsetting a gasser in lower Cretaceous completed several months ago and that later went dead, Bailey Gaunce Oil Company is straight reaming at

Louisiana Coast Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSCO—		
Superior Oil Prod. Co., Allemonde 1	462	8637
M. Kahn 2	303	8733
CAMERON MEADOWS—		
Burton Sutton, School Land 1 (wo)	6	4969
Emerson Oil Co., Bright Penn 1 (wo)	50	2790
GILLIS—		
Union Sulphur Co., Powell Lbr. Co. 1	540	6743
LEESVILLE—		
Lincoln Oil Co., Viszer 1	85	3878
ROANOKE—		
Shell Pet. Corp., Kratzer 2	825	7807
SULPHUR—		
Union Sulphur Co., Noble 2	380	5146
VINTON—		
Vinton Pet. Co., Grey 12	*	1991
ST. MARTIN PARISH—		
W. J. Weir, Declouet 1, sec 108-8s-se	*	2322

*Failures; †Junked; ¶Million cu. ft. gas.

North Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO PARISH (Pine Island)—		
Press & Lambert, Lane & Simon 1, nw sw 15-20n-15w	135	2196
DE SOTO PARISH (Naborton)—		
W. T. Coleman, Ferguson 1, sw sw 18-12n-11w	¶½	850
OUACHITA PARISH (Monroe)—		
Hatcher & Evans, Fee 1, 41-19n-4e	¶3½	2192
RED RIVER PARISH (Bull Bayou)—		
A. D. Mytilen, La. Delta Pecan Co. 1, sw sw 27-13n-11w	*	866
SABINE PARISH (Zwolle)—		
E. D. Holcomb, Porter 1, ne se 7-7n-11w	†	2580
D. M. Wallace et al, Sabine Lbr. Co. 1, nw nw 12-7n-12w	75	2402

*Failures; †Junked; ¶Million cu. ft. gas.

3598 feet with rathole bottom at 3628 feet in lower Cretaceous preparatory to a test, in Jenkins 2, Section 35-13n-12w in the old Naborton field, DeSoto Parish, that produces oil from the Tokio at the 2700- to 2800-foot level.

Twelve Tests Planned For Naborton Bayou Lease

Shreveport, La.—V. T. Bolin of Fort Worth, Texas, has leased the drilling rights in the bed of Bayou Pierre in Section 14-12n-11w, De Soto Parish, in the old Naborton field, and plans a drilling campaign of 12 tests.

Adjacent to Bolin's acreage Windsor Oil Company and Circle W Oil Company of Houston several months ago leased the Jenkins fee of 960 acres and have drilled four wells of a contemplated 30-well campaign. All four wells completed so far have been productive in the chalk after acid treatment, the daily yield ranging from 50 to 120 barrels daily. The former producing horizon in Naborton has been the Tokio.

Bolin's proposed tests will offset such producers as are completed on the Jenkins tract.

Blanchard Gas Field Getting Two-Mile Extension

Shreveport, La.—Indications were given last week of a two-mile north extension of the shallow Nacatosh gas field near Blanchard, Caddo Parish, as a result of a formation tester being run at 940-52 feet in Texas Trading Company's A. T. Curry 1, NW SW 28-19n-16w, with a showing estimated at one and one half million cubic feet of gas. Elevation is 279 feet. The well had six feet of sand under a cap rock, the sand being logged from 946 to 952 feet.

The hole is being reamed down preparatory to setting casing. Texas Trading Company has several hundred acres surrounding the test.

Blanchard gas field now has 25 small gas producers, most of them from the Nacatosh at 900-1000 feet. Arkansas Natural Gas Corporation is buying the gas.

Deep Tests in Arkansas Report Drilling Progress

El Dorado, Ark.—H. L. Hunt, Inc.'s E. F. Gregory 15, Section 10-17-14, Rainbow City field, Union County, which is planned as a 7000-foot test, is drilling below 4780 feet after logging a salt water sand at 4664-74 feet in what was identified as the Travis Peak formation.

Joe Modisette and associates' D. G. Sturdivant 1, SE SE 6-18-13, Union County, three miles west of the Urbana field, is ready to spud and it will go to the formation below the red bed series of the lower Cretaceous.

Gulf Refining Company has spudded Werner Sawmill Company 49, SW NW SW 5-16-16, Union County, Smackover field, which will go to 8000 feet.

Four New Tests For Arkansas

El Dorado, Ark.—Four new locations were announced last week in Arkansas, and two locations were abandoned. Two of the new locations were in Miller County. M. D. K. Fitzwater and associates have derrick up for E. H. Beck 1, SWc NW SW 34-15-26 in the producing limits of Garland City, and offsets Dr. Harber et al's Beck 1 in the same quarter that was abandoned with a show of oil at 2980 feet.

One fourth of a mile northwest of his discovery well in Miller County, C. V. Lenz is moving in materials for Dale 6, SWc SE NW 24-15-26. He recently abandoned a test a quarter of a mile southwest of the discovery well. No other production was ever found around the discovery well, the Garland City pool later being developed in Sections 33 and 34-15-26 and 4-16-26. B. B. J. Oil Company abandoned location for E. L. Beck 1, NEc NW SW 35-15-26 and Bevery Oil Company abandoned location for a Miller County wildcat, Commercial National Bank 1, SW NE SE 30-17-28.

Two new locations were announced for Rainbow City, Union County. Alice-Sidney Oil Company's E. F. Gregory B-1, SE NW SW 10-17-14 is rigging and Hawkins and Caplis made location for L. E. Kelly 1, NE NE SE 9-17-14.

Snow-Black Petroleum Company of Mississippi is reported assembling a block near the old Lisbon shallow field, Union County, for an early test. This field has about 330 barrels daily of stripper production and has had no new activity in several years.

To Test Ouachita County Well Soon

El Dorado, Ark.—Early testing of a well that will have an important bearing on the future of the Camden area, Ouachita County, where a small Nacatosh sand oil producer was recently completed at 1394 feet, is in prospect two miles southeast of the lone producer.

Kraft Oil Corporation cemented six-inch casing at 1420 feet after a reported oil show in Nacatosh in Rath & Cartier 1, NW SW SW 32-13-17, with hole bottom at 1428 feet. The discovery well is in Section 25-13-18.

A west offset to the discovery well shut down waiting orders at 1390 feet last week. This is J. D. Reynolds' Bragg 1, SW NE SE 25-13-18. Dry holes have been completed offsetting the discovery well north and south at distances of 660 and 630 feet respectively.

Two Arkansas Completions Make Pumping Oil Wells

El Dorado, Ark.—The twentieth producer from the Taylor sand in the upper red bed series of the lower Cretaceous was completed last week in the Rainbow City field, Union County, Arkansas, with the addition of an 80-barrel pumper which is inside the producing limits of the new horizon.

Urbana field, also in Union County, added a 60-barrel daily pumper and a dry hole was completed in the Garland City field, Miller County, these being the only completions last week in Arkansas. The Garland City failure had a show of oil at 2920 feet where hole was bottomed but refused to pump. It is between two producers.

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Arkansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MILLER COUNTY (Garland City)—		
Dr. Harber et al, H. E. Beck 1, sw nw sw 34-15-26	*	2980
UNION COUNTY (Rainbow City)—		
C. E. Murdock, Inc., J. M. Gregory 7, se ne se 10-17-14	80	3318
UNION COUNTY (Urbana)—		
McCreslenn Oil Co., Gus Norman, nw se ne 3-18-13	60	3581

*Failures; †Junked; ¶Million cu. ft. gas.

New Lea County Field Opened Northwest Eunice

Hobbs, New Mexico.—Lea County added a new oil producing area the past week when Amerada Petroleum Corporation's State 1-D, first test on the Monument structure, proved capable of making a small but commercial producer from lime at 3895 feet, or 305 feet below sea level. Confident that greater penetration of the lime will yield flowing production, the owners ordered tubing pulled late last week to deepen. The well is located at C NW NW 1-20s-36e, about eight miles north by west of the Eunice field, nearest production, and 10 miles southwest of the Hobbs field. Although the company is fortified with leases on more than 2500 acres on top of the structure as outlined by geophysical surveys, lease ownership in the area is greatly split up. An active exploration campaign is inevitable should deeper drilling bring forth a flowing well.

The Monument structure test, designated as such by reason of a little settlement bearing that name located about four miles to the west, swabbed 163 barrels of 32 gravity oil, testing 53 degrees temperature, during the 24-hour period ending 8 p. m. February 20. Three-inch tubing was lowered to 3867 feet, and the hole swabbed down on February 17, but several days were required to properly clean the hole of heavy drilling fluid and weighting materials purposely used for fear of a blowout of heavy gas production indicated in the upper portion of the lime. Crude oil is to be used for circulation in deepening in order to record production increases expected. High-pressure gas production available from bradenhead on seven-inch pipe, which was cemented at 3760 feet, and 9⅝-inch pipe landed above the brown lime with 450 sacks of cement at 2314 feet, was utilized in flowing the well during the cleanout period.

About four years have elapsed since Amerada Petroleum Corporation's officials became satisfied through seismograph surveys that a pronounced structure exists in the monument area. Buying of leases along a northwest to southeast trend from the present wildcat location followed, but no particular campaign was staged. Crude market conditions in southeastern New Mexico continued adverse to exploratory work until the past year. In the meantime other companies gained knowledge of the structure through geophysical activity, and sought protection, resulting in lease bonuses advancing. Prices jumped to $200 per acre, 50 percent cash towards the end of 1934. Decision to drill was made last summer when Amerada Petroleum Corporation obtained the 160-acre well site from The Texas Company in exchange for a 40-acre lease in the south part of the Cooper field assigned the latter. The Texas Company scored a big well on its 40 acres in December, and still owns close in protection against the Monument well. An unsuccessful effort was made to work out a unit plan of development.

Isolation of the Monument wildcat from other tests in the general area eliminates subsurface correlation, while the surface affords comparatively little geological information of value in out-

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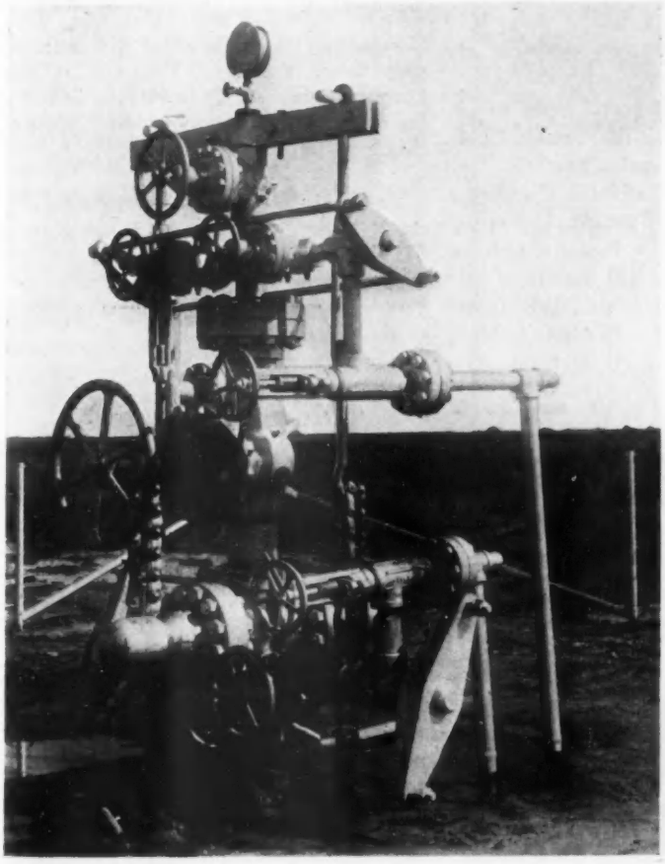

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lining a structure. The geophysical picture is reported to indicate a structure comparable in area with the Hobbs, Eunice and Cooper reef type structures. The latter two are wide open for extensions to the north and south, while all three are rated among the major fields in the southwest.

Correlated on a basis of the subsea depth of the oil horizon, the Monument area scored production from about the same zone as the Eunice field. Top of the brown lime, a geological marker used extensively in Lea County, was not definitely called by paleontologists assigned to the Monument test. The salt section was logged at 1060-2255 feet, with an elevation of 3590 feet. The interval between the base of the salt and the oil zone is considerably greater than the average for the Eunice field, thereby influencing most geologists tentatively in identifying the oil horizon as of the same age as the Hobbs field. The latter is producing from extremely porous limestone near the 4200-foot level, or about 550 feet below sea level, and also offers high gravity oil in limited, but probably commercial volume from the so-called Bowers sand near the 3150-foot level. Production in the Hobbs field averages 35 gravity, with the typical Lea County and West Texas sulphur content. The Eunice field produces oil comparable in gravity with that obtained from the Monument well.

Regardless of the final results attained by deepening operations on the pioneer well for the Monument structure, a number of tests by other lease owners appears probable. Continental Oil Company and The California Company, joint owners of a Federal permit, situated several miles southeast of the wildcat producer, with expiration scheduled for May 1, have assigned 1220 acres for the drilling of a test in Section 7-20s-37e. Anderson-Prichard Oil Corporation, Oklahoma City, are to make the test, having a number of other blocks scheduled for immediate drilling in the county.

Operations have been started by Humble Oil & Refining Company on a relief well to penetrate the lime horizon and kill the heavy flow of dry gas and carbon dioxide gas in its J. L. Coates 1, C NW NE 10-24s-36e, a north outpost location for the Cooper field. The well has been out of control almost continually since last October, and is considered hopelessly junked at 3355 feet, but due to craters forming beyond the derrick site when the gas flow is shut in it can not be properly plugged until production is killed with a relief well.

Stanolind Oil & Gas Company's A. E. Meyer 4-A, C NE SW 22-24s-36e, a west edge well for the Eunice field, was reported to be flowing 20 barrels of fluid hourly, 65 percent bs and w, with 239,000 cubic feet of gas daily. It has been plugged back from 3608 to 3560 feet, or 207 feet below sea level. Continental Oil Company and The California Company, joint operators, have three tests on their D. L. Vaughan leases, forming a north row for the field, ready to drill out cement plugs and test the 3500-foot lime after cementing 5½-inch casing strings on each.

Phillips Petroleum Company and Pure Oil Company's Worth 1, C NE NE 9-24s-36e, a southwest outpost test for the Cooper field, furnished a surprise development last week when lime showing oil and gas saturation was cored at 3343-3361 feet, or about 100 feet below sea level. The hole was deepened to 3393 feet and operations halted for a drill stem test.

Having logged top of brown lime at 3214 feet, or 48 feet above sea level, Worth 1 is believed to be off structure.

Productive limits of the Eunice field were advanced one location north by the completion of Tide Water Oil Company, Devonian Oil Company and Darby Petroleum Corporation's State-Foster 3, C NW NE 8-21s-36e, flowing 430 barrels of oil and 500,000 cubic feet of gas daily from lime at 3882-3901 feet. The hole is bottomed at 3910 feet, or 317 feet sub sea.

Cut Bank Extension Try Located West of South

Cut Bank, Mont.—Two miles west of the southern end of the Cut Bank field, Gardner-Smith Syndicate's Tweedy 1, NEc Section 36-33n-6w, is hauling in material. The test is just west of the Cut Bank Creek where it cuts across the northeast corner of the section, on deeded land in the Blackfeet tribal reservation. Nearest production is two miles to the northeast. Operators expect to find the same thickened sand conditions to the west of the south field as William Fulton's Haggerty 1, CNE NE NE 16-34n-6w, encountered when it extended the northern area of the field two miles to the west more than 18 months ago. The latter test was good for 104 barrels initial at 3040 feet.

Watson et al's Miller 1, NW NE 1-33n-6w, is drilling out plug with 6⅝-inch casing cemented at 2878 feet. It drilled one foot in the lower Cut Bank sand to 2878 feet and oil began rising in hole.

A. B. Cobb's Walburger 4, SE SE 35-35n-6w, has deepened from 2792 feet to 2840 feet and was swabbing in. A week ago it showed for a 10-barrel well at 2792 feet.

It is reported that R. C. Jeffires may abandon location for Hope 1, Lot 10, Section 12-33n-6w, a town test. Montana Power Gas Company's State 1, CSW 16-35n-5w, a recent completion, averaged 35 barrels daily on a 10-day pumping test.

Cody, Wyo.—Rocky Mountain Gas Company's Oregon Basin Oil & Gas Company 1, CSW NW 32-51n-100w, in the Oregon Basin field, Park County, is waiting on cement to set around the 12½-inch casing at 100 feet.

Malta, Mont.—British-American Syndicate's Miller 1, in the southwest corner of NW 17-32n-33e, is spudding at 121 feet, and is a first report from the Bowdoin gas field in Phillips County, eastern Montana.

Mountain States Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MONTANA		
GLACIER COUNTY (Cut Bank Field)—		
Watson et al, Miller 1, nw ne 1-33n-6w	*	2893
NEW MEXICO		
CHAVES COUNTY—		
Commanche Drlg. Co., Sleep Purcell 1, ne se 10-11s-36e	*	1583
LEA COUNTY (Eunice Field)—		
Tide Water, Darby & Devonian, State 3, c nw ne 8-21s-36e	435	3910
LEA COUNTY (Hobbs Field)—		
J. P. Cusack et al, Moon 1, c sw sw ne 28-18s-38e	7175	4200

*Failures; †Junked; ¶Million cu. ft. gas.

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Rocky Mountain Body Suggests Lease Bill Changes

Casper, Wyo.—With a view to suggest changes in the proposed leasing bill for oil and gas prospecting permits on the federal domain introduced a week ago by Senator Joseph C. O'Mahoney, (D), Wyoming, and Congressman Paul Greever, (D), Wyoming, officers of the Rocky Mountain Oil & Gas Association are calling a general meeting of the organization here sometime next week. The date has not been set.

The association will suggest amendments to the bill, principally a reduction of government royalty, allowing the permittee holder a chance for an overriding royalty, and that a permittee may file on 640 acres. There was no change suggested to the dropping of the "A" lease preferment. Amendments to the bill are being drawn up by Judge Charles E. Winter, Casper attorney and oil man, an authority on public domain questions.

Craig, Colo.—Stanolind Oil & Gas Company's Parkinson 35, SE SE NE 22-4n-92w, in the Iles Dome field, Moffat County, northwestern Colorado, is drilling at 2773 feet. It topped the Frontier at 2351 feet.

Osage, Wyo.—One new test started in the Osage field this week and the first well to start in 1935. Albert Jones is rigging up for Bock 9, CSW NE 21-46n-63w. Irene Eaton's Government 14, NE SW 30-46n-63w, is running casing to 1340 feet.

Another California Gas Field Opened

Los Angeles.—The discovery of two new gas fields in less than two weeks is the accomplishment of Standard Oil Company of California, thus adding two new sources of gas supply for California. Both wells were straight wildcats, but neither furnished exceptionally large production. Gas from both wells was dry.

Standard's Title Guarantee and Trust 1, Section 1-25-23, in Kern County, about 15 miles north of the Lost Hills area, was completed at 2454 feet with nine-inch casing cemented at 2425 feet. Fifty feet of seven-inch liner was run, and included 22 feet of perforated. It started out making 12,000,000 cubic feet of gas through ½-inch choke. Some reports from Lost Hills credited the well with a flow of 20,000,000 feet.

Standard's Hill 1, Section 8-27-23, Kern County, in the Semitropic area 10 miles east of Wasco, blew out February 10 and estimates on the gas production ranged from 50,000,000 cubic feet up, wide open and wild. It is prepared for another production test.

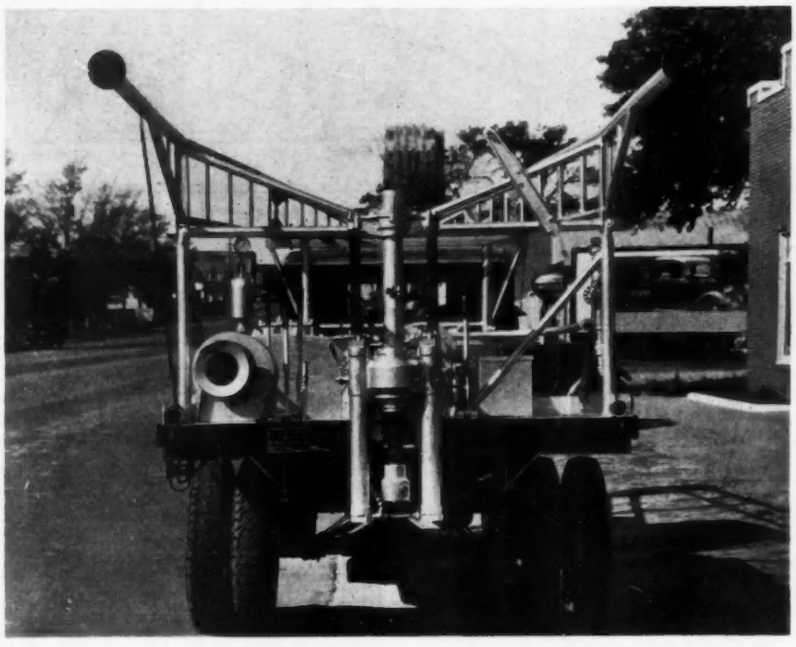
Hill 1 stopped drilling at 3193 feet and 13⅜-inch pipe had been cemented at 3135 feet. Well blew out while pulling tools from the hole after cleaning out to five feet below the shoe.

Heretofore no gas had been found in either area and in some circles it is felt a nice gas field which it is indicated might have a long life is as valuable as a relatively small oil field. There is a constant increase in the use of gas in California for commercial purposes and there are still several communities without gas.

Santa Fe Springs

Los Angeles.—That new light oil production is wanted in Los Angeles Basin is indicated by the new activity at Santa Fe Springs, where the drill has been almost completely idle for about three years.

Eight wells are now drilling and five new ones will be started in the next week or ten days. General Petroleum Corporation is active at three holes and one new one is starting. Union Oil Company is drilling four wells and getting ready to start four others.



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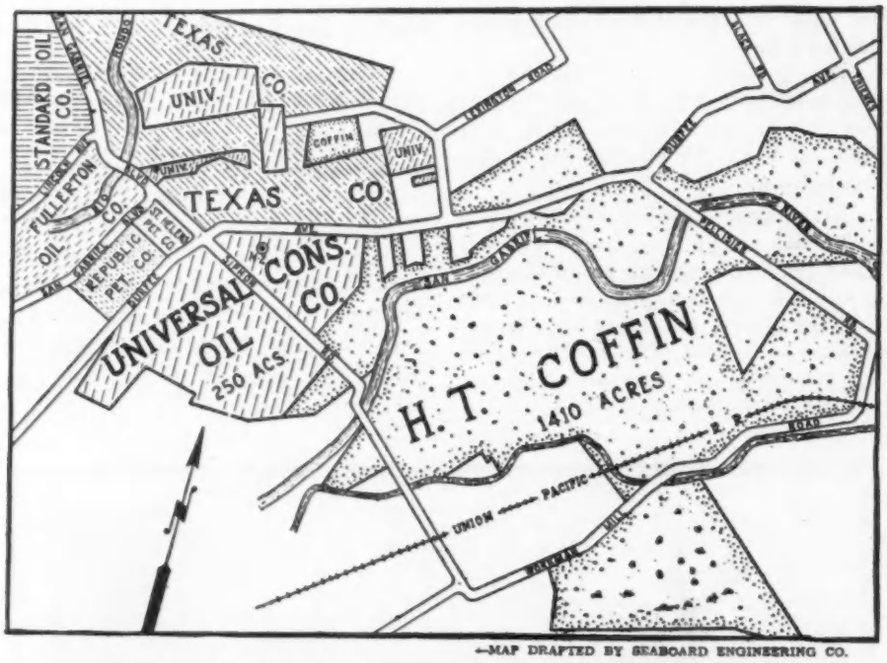


—MAP DRAFTED BY SEABOARD ENGINEERING CO.

Showing location and surrounding ownership of Universal Consolidated Oil Company's No. 2 in Montebello field, Los Angeles County, California

New Field Opened In Los Angeles County

Los Angeles.—The proving of either a new field or an important extension of the old Montebello field in Los Angeles County held center of attention during the past week and caused the first real scramble for leases in the general area for the first time for several years.

Universal Consolidated Oil Company's No. N-2, located near the north edge of the company's 250-acre lease, made 1250 barrels of 35.6 gravity oil with bottom of hole at 5136 feet. String of 11¾-inch casing had been cemented at 5016 feet and the well was swabbed onto production without setting liner or perforated pipe.

The first flow was through 1 1/16-inch choke and the pressure built up to 750 pounds on the casing, and about 800,000 cubic feet of gas was coming with the oil.

The well was killed February 14 so a liner could be run. A 5¾-inch liner including 100 feet of perforated pipe was landed at 5118 feet and hole was washed to bottom. String of 2½-inch tubing was hung at 4960 feet.

Well was swabbed all day February 16 and until about noon the following day, when it made a short flow. During the night it made flows of five to 20 minutes duration. About noon February 18 the well started flowing steady at a rate of 800 barrels a day. The cut was close to five percent, but was fresh water, and the pressure gradually built up to 550 pounds on the casing and 300 pounds on the tubing by late afternoon.

The well is undoubtedly a discovery, but its lack of pressure has been a disappointment. Late February 18 it was felt it would continue to increase production, probably to 2000 barrels.

The well is offset by the Texas Company's large tract, where it is likely a new well will be started at once. Republic Petroleum Corporation has a lease offsetting Universal's tract to the northwest. Standard Oil Company of California, Fullerton Oil Company and St. Helens Petroleum Company hold leases sufficiently close to call for wells.

H. T. Coffin has 1410 acres in one block to the southeast of the new well which he has so far refused to sell, and he also holds a small tract almost directly north of the well, adjoining The Texas Company's tract. The San Gabriel River cuts through the large Coffin tract, and the new area is well served with good roads.

The new well is located to the southeast of the old Montebello field, extending into a flat country. Many authorities feel the new well is producing from a structure not similar to the deep sand picked up in the old Montebello field, but others disagree. Later developments will tell the story.

Twenty New Tests For California

Los Angeles.—Notices were filed in California for the starting of 38 new wells during the two weeks ending February 9, and 20 of this number were filed last half of period. This brought the total so far this year to 87, compared with 61 for the same time in 1934.

Five of the new wells are for Mountain view near Bakersfield, and two were for Edison and one each for Poso Creek and Coalinga. One was for a wildcat in Kern County, in Section 6-30-30. McKittrick was credited with one new start and the Mesa at Santa Barbara gets one.

Los Angeles. — Wilshire Annex Oil Company's Potrero 2, deep test in the old Potrero field, with bottom at 8365 feet, is flowing at a daily rate of 65 barrels, cut from 50 to 100 percent. It is indicated Wilshire will give up the effort to prove a new zone and no other company has shown any disposition to drill a test.

Ventura Avenue Extended Mile East

Los Angeles.—An extension of the deep zone, sometimes known as the Fifty-seven formation, almost a mile to the east at Ventura Avenue, was accomplished by the completion of Associated Oil Company's V L & W 27 at 9113 feet for 1350 barrels of 30 gravity clean oil and 1,200,000 cubic feet of gas. String of 5⅜-inch pipe was cemented at 8687 feet, and flow was through 468 feet of perforated casing.

The completion of this so-called edge well in the deeper zone indicates that the formation first found on the Lloyd lease below 9000 feet probably underlies a very wide area, and extends the life of the field far into the future.

Seventeen wells are actively drilling in the field, all by Associated and Shell Oil Company except one hole being drilled by

California Completions

Company, Well and Location	Initial. Prod. Bbls.	Depth
BREA CANYON—		
General Pet. Corp., Tonner 15	400	4247
DOMINGUEZ—		
Shell Oil Co., Reyes 62	800	4889
LONG BEACH—		
Allen Pet. Corp., No. 6	300	4360
Richfield Oil Co., Danni 9	160	4895
KERN FRONT—		
Kern River Oilfields No. 1	150	2139
KERN COUNTY—		
Standard Oil Co., T G T Co. 1	¶12	2455
MOUNTAIN VIEW—		
Gilmore Oil Co., Mullaney 1	350	5529
VENTURA COUNTY—		
Associated Oil Co., V L & W 27	1350	9113
FRESNO COUNTY—		
The Texas Co., Circle 1	*	1882
SANTA BARBARA COUNTY—		
Royalty Service Corp.'s Sisquoc 1	*	4500

*Failures; †Junked; ¶Million cu. ft. gas.

General Petroleum Corporation. Associated is drilling at nine holes and is getting ready to start three more. Shell Oil Company is drilling seven and is rigged to drill at another.

Associated is active at two wells where bottom in each is below 9000 feet. At Lloyd 133, a fishing job developed at 9218 feet and a sidetracking job has progressed to 8243 feet. Lloyd 134 is fishing for 13 stands of drill pipe with bottom at 9398 feet.

Kern County

Los Angeles.—Considerable interest is being manifested in Reserve Oil & Gas Company's Tejon Ranch 1, Section 2-10-19, near Wheeler Ridge, in Kern County, where a fair oil sand was picked up from 2674 to 2690 feet.

Formation tester was set and showed considerable gas, some oil and a lot of mud, but since only about six feet of the sand was well saturated, the showing was not discouraging. At close of last week, the hole was being drilled ahead at 2715 feet.

Last casing set was 12½-inch string at 575 feet.

State of Michigan May Enter Oil Business

Mt. Pleasant, Mich.—Bills introduced in the state legislature call for a million dollar revolving fund to produce, pipe and refine crude oil from state owned lands and to increase and reallocate the present state oil and gas severance tax.

The Oil and Gas Association has taken a determined stand against both of the measures, in particular the severance tax measure which on the basis of last year's production would increase this tax from approximately $219,000 to $330,000.

Under the laws of 1929 a two percent severance tax is levied on all oil and gas production based on the barrel price of oil and 1000 cubic foot price of natural gas. It is divided 40 percent to the state, 40 percent to the townships and 20 percent to the counties in which the oil or gas is produced.

The bill also would re-allocate the tax with the state retaining 9/15, the townships 4/15 and the counties 2/15.

The state drilling, production and refining bill calls for establishment of a three-man Oil and Gas Commission to direct exploration, building of pipe lines and refineries and their operation. At the present time state lands are leased to private companies at public auction on the highest bid basis, with rentals of 50 cents to $1 per year and royalty of usually one eighth but in some cases one fourth. About 65,000 acres of state owned lands are under lease. Twenty-seven producing wells have been completed on state acreage.

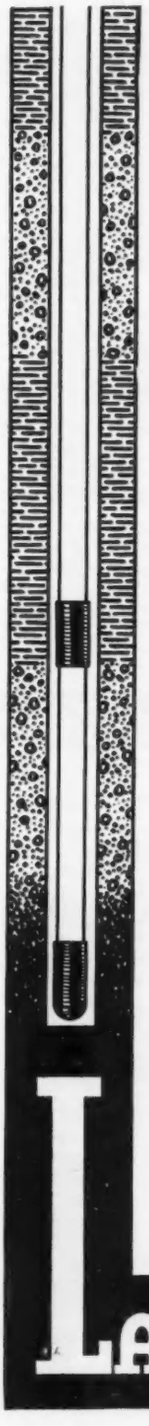
Weather Curtails Michigan Activity

Mt. Pleasant, Mich.—Severe winter weather this week had cut active drilling operations in Michigan to 70 out of 136 tests on location, some waiting on rig builders, others waiting for roads to be cleared to haul in materials and others shut down at varying depths.

Five counties, Ogemaw with 37, Midland with 18, Isabella with 24 and Mecosta with 12 locations comprise the most active districts with a little better than 50 percent active.

Improved market conditions for Michigan crude have shoved pipe line runs to an average of over 35,000 barrels daily. This market demand in view of the fact that about 85 percent of the state's potential is needed to meet it, is expected to bring various drilling campaigns this spring both in undeveloped proven areas and particularly in wildcat districts.

Pure Oil Company's Baker 1, Isabella County, 13n-5w-15, topped Dundee lime at 3590 feet and encountered brine at 3606 feet with a light gas and oil show at 3590-91 feet. Pipe will be lowered and



LARKIN

Bakelite Float Shoes Are Superior On 6 Counts

LIGHTER —Fabric Bakelite, of which the valves and guides are made, has half the weight of concrete by volume.

TOUGHER —The Larkin Bakelite Valve has withstood a pressure of 214,000 pounds in actual Hydraulic tests.

STRONGER —With a tensile strength of 7,000 pounds and a compressive strength of over 28,000 pounds, Bakelite is 49% stronger than concrete.

TIGHTER —All Larkin Float Shoes have water-tight machined and lapped valves —assuring perfect seating.

BIGGER —With 7 square inches of opening in valve and guide, plus by-passes to prevent clogging, it is almost impossible to plug Larkin Bakelite Shoes.

MORE EASILY PULVERIZED —While Fabric Bakelite is far stronger than concrete, it is easily pulverized by the drill and circulated out of the hole.

At all Supply Stores
Warehouse stock at Houston, Texas, Tulsa, Okla., and East Texas.
LARKIN PACKER COMPANY, ST. LOUIS

LARKIN PACKER CO.

the test deepened for a test of the Monroe lime.

In Livingston County, Talbot Oil Company's McPherson 1, 3n-4e-35, deep test wildcat, is reaming to lower pipe to 4990 feet where a broken reamer is lodged with bottom hole at 5012 feet. It is a Trenton lime test, only active deep test in the area.

Two tests are active and two others are rigged in Gladwin County, now looked to as the hottest spot for prospective deep lime development in the state. Another test just across the county line east into Arenac is ready to spud.

Possible westward extension of the Midland-Porter area was indicated this week when John F. Martin's Green 1, 13n-2w-13, flowed 200 barrels on a 14-hour test from 3429 feet producing from Dundee lime. Other tests in this vicinity were completed from 30 to 60 barrels.

Michigan Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MIDLAND COUNTY—		
McHugh Ajax, Rayner 1, 13n-1w, sw nw nw-18	40	3437
Pure Oil Co., Peek 4, 13n-1w, se sw nw-16	125	3430
Bond-Root 4, 13n-2w, c-nw ne-3	170	3451
John F. Martin, Green 1, 13n-2w, ne se ne-13	300	3429
McClanahan Oil Co., Hamlin 1, 14n-2w, se ne se-29	*	3518
ISABELLA COUNTY—		
Old Dutch Oil Co., McGuire 1, 16n-4w, c-sw sw-36	¶½	1300
D. W. Null, Prout 1, 15n-4w, sw sw sw-7	30	3703
OGEMAW COUNTY—		
Ide Oil Co., Schubert 1, 22n-2e, se ne nw-19	100	2745

*Failures; †Junked; ¶Million cu. ft. gas.

Eastern Fields Completions

PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls.	Depth
WASHINGTON COUNTY—		
James McCracken, H. B. Saunders 1	¶	2850

WEST VIRGINIA

BOONE COUNTY—		
Owens Illinois, Peytonia Coal 22	¶	2539
Pure Oil Co., Federal Oil Co. 70	¶	3058
Pond Fork O&G Co., Cole & Crane 19	¶	2692
CABELL COUNTY—		
Carney Gas Co., James Mills 1	¶	1630
Fairfax Gas Co., Leonard Paugh 1	¶	....
CALHOUN COUNTY—		
Barker & Co., A. R. Stump 1	30	....
G. L. Cabot, Inc., W. T. Rafferty 9	1	3060
Starcher & Richards, J. P. Graybill 1	25	....
Southwestern Gas Co., Daubins 1	¶	1982
Carroll & Hamilton, E. C. Knotts 1.	*	2370
T. W. Elliott & Co., Freed & Co. 1	*	1797
DODDRIDGE COUNTY—		
Fred Brown, Fred Brown 1	1	2208
A. M. Greathouse, Greathouse Hrs. 1	*	2853
GUERNSEY COUNTY—		
George E. Jewell & Co., Calvert 1	4	....
McGee 1	¶	....
KANAWHA COUNTY—		
Kanawha O&G Co., Baking 11	¶	....
Valley Gas Co., G. W. Harless 2	5	....
LINCOLN COUNTY—		
Lee Sanson, Tr., John M. Sias 1	¶	2438
RITCHIE COUNTY—		
Lucky Strike Oil Co., Robinson 2	3	....
W. A. Brickerstaff, John Grogan 1	5	2254
New York Pet. Co., J. W. Marshall 1	¶	1880
A. R. Leatherman, C. B. Markel 1	¶	1937
J. W. Leonard, R. E. Elder 1	1	2265
Kelley & Mason, B. F. Fleming 1	¶	1963
ROANE COUNTY—		
Reyuda O&G Corp., Moore Hrs. 1.	15	....

SOUTHEASTERN OHIO

BELMONT COUNTY—		
Peters & Patterson, Seminchi 1	¶	....
R. Lewis & Co., Dyken 1	¶	....
MONROE COUNTY—		
John Lumbatis & Co., Hawkins 1	2	1938
Homer Newhart & Co., Burkhart 4.	*	1642
Gordon Green & Co., Baker 3	¶	1040
Day O&G Co., Homer Burkhart 4	*	1680
L. E. Stoffel, Mike Stoffel 2	*	1292
MORGAN COUNTY—		
Choguille & Co., Matson 6	¶	1637
NOBLE COUNTY—		
Parker & Walters, Brinkmier 2	*	795
WASHINGTON COUNTY—		
F. H. Russell, Zumbro 2	1	480
H. B. Walker, Tr., Wymer 49	2	486
Seare & Neppler, Wagner 11	*	520
Harris & Co., M. J. Pool 2	*	3100
D. T. Orndoff, P. Roe, Jr. 4	15	1305
I. L. Ormiston, Ormiston 1	¶	1160
Helen J. Burt, Burt 13	2	665
Schneider & Schneider, Richey 1	2	765
McBride & Becker, King Hrs. 1	1	1091
A. J. West & Co., Sindeldecker 2	2	....
Burt & Co., H. L. Plumley 28	3	665
J. C. Garner & Co., Jackson 3	*	1557
Brown Bros., Flowers 1	*	1761

CENTRAL OHIO

ATHENS COUNTY—		
D. T. Orndoff, Morris 1	¶	1588
COSHOCTON COUNTY—		
Preston Oil Co., Cary D. Harris 1.	56	3173
Preston Oil Co., Harris 3	20	3175
FAIRFIELD COUNTY—		
City Nat. Gas Co., J. Matheney 1	¶	2166
GUERNSEY COUNTY—		
C. C. Wharton & Co., C. A. Frame 4	10	1326
William Larick & Co., DeGolier 1	5	3396
Ferguson & McCullough, Foraker 5	¶	1507
Jewell & Co., Ringer & Co. 4	10	1369
Miller & Jewell, Albaugh 1	*	1330
R. A. McBride & Co., Blank Bros. 4	¶	1273
Preston Oil Co., Arie Little 1	25	1312
HOCKING COUNTY—		
Preston Oil Co., Sunday Creek 1567	¶	3552
KNOX COUNTY—		
Pure Oil Co., Mavis 4	100	3187
Ohio FG Co., H. H. Scott 1	¶	3102
LICKING COUNTY—		
Blue Rock O&G Co., Freese Hrs. 5	68	3020
LORAIN COUNTY—		
J. W. Cushing, Frank Barr 1	¶	2133
MEDINA COUNTY—		
Preston Oil Co., Kelina 1	*	2906
MEIGS COUNTY—		
Ohio FG Co., Winters 1	¶	2063
Meigs Dev. Co., Ours 1	¶	2024
MUSKINGUM COUNTY—		
Fritz O&G Co., Swingle & Swingle 1	10	4261
RICHLAND COUNTY—		
Ohio FG Co., Minerva Ward 3	¶	2422
STARK COUNTY—		
East Ohio Gas Co., Esslebaum 2	¶	4519
Ohio FG Co., Warstler 2	¶	4416
TUSCARAWAS COUNTY—		
Frank Walton & Co., Dunlap 1	¶	582
LIMA FIELD		
SENECA COUNTY—		
R. C. Jones, Henry King 1	5	1389
WYNDOT COUNTY—		
Newcomer & Co., Williams 1	*	1495
G. H. Slack, L. Swerline 2	¶	1364

INDIANA

DAVIESS COUNTY—		
Indiana Sw Gas Corp., Killon 1	.	842
C. W. Brittam 3	*	500
Mid-West Dev. Co., Ruth Akester 1	¶	737
DECATUR COUNTY—		
Westport Natural Gas Co., Zack Boicourt 3	¶	863
DUBOIS COUNTY—		
Ohio Oil Co., C&J Auffert 1	*	9634
L. Damron, A. Kluesner 1	*	694
GIBSON COUNTY—		
Big Four Oil & Gas Co., O. H. Redburn 1	*	1753
JAY COUNTY—		
N. E. Masters, Henry Berger 1	*	....
A. R. Smith 1	*	....
KNOX COUNTY—		
Meade Oil Co., C. E. Beard 1	¶	747
SULLIVAN COUNTY—		
Dome Gas Co., Ross Martz 1	¶	320
W. Jennings 1	¶	....
W. Jennings 2	¶	....
M. B. Jewell 1	*	561

KENTUCKY

OHIO COUNTY—		
W. E. Hupp & Co., E. Clark 1	*	....
I. L. Bellamy 1	20	....
Mecca Oil Co., J. T. Smith 8	100	....
J. T. Bartlett, C. G. Harrison 1	¶	....

*Failures; †Junked; ¶Million cu. ft. gas.

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H. P. GOTT MFG. CO., Winfield, Kansas
KEEP PURE DRINKING WATER ALWAYS HANDY

Drilling Reports on Important Wildcats

CALIFORNIA

KERN COUNTY

BUENA VISTA LAKE—Shell's B. V. A. 1, 9-32-25, dr 4475 ft.

CALIENTE—Pennell & Kerr's No. 1, 31-29-30, dr 200 ft. Signal O&G Co.'s S. P. Land 1, 31-29-30, dr 2250 ft.

COMANCHE POINT—Comanche Oil Co.'s No. 1, 15-32-29, sd 4325 ft. Tejon Ridge Oil Co.'s No. 1, 23-32-29, td 1580 ft. Formation tester recovered only mud.

DEVIL'S DEN—Amerada's No. 2, 17-26-19, sp. Richfield's Alferitz 2, 14-25-18, dr brown shale 1870 ft.

NEAR EDISON—Cara Vel Pet. Corp.'s No. 1, 19-30-30, td 1910 ft pumping water. H. B. Oil Co.'s Clemens 1, 6-30-30, sp. Mountain View Dev. Co.'s Spangler 1, 12-30-28, cored os 4990-5020 ft td 5020 ft.

GOULD HILLS—Texas Co.'s Jared How 1, 29-29-21, dr brown shale 3812 ft.

GREENFIELD—Sea Cliff Oil Co.'s Houghton 1, 7-31-28, dr shale 2590 ft.

LOST HILLS—Standard Oil Co.'s United 1, 2-26-20, dr shale 1850 ft set 22-in 1658 ft.

NEAR MOUNTAIN VIEW—Hogan Pet. Co.'s Symons 1, 4-31-29, dr shale 4840 ft.

SEMITROPIC—Standard's Hill 1, 8-27-22, td 3193 ft 13 3/8 in set 3135 ft, blew cut, only gas; wrecked dk, cleaning up for test.

SO. BUTTONWILLOW—Seeple Oil Co.'s No. 1, 5-30-24, sd 3730 ft.

SOUTH DOME—Continental's Gatchell 28-7, 7-25-20, dr shale 2240 ft.

TEMBLOR HILLS—Robt. Foster's No. 1, 2-32-22, td 2192 ft. Redr 2050 ft.

WHEELER RIDGE—Badger Oil Co.'s El Tejon 1, 31-11-19, td 6229 ft, Redr to 4425 ft sd. Reserve O & G Co.'s Tejon Ranch 1, 2-10-19, dr shale 2715 ft, os 2675 to 2690 ft.

WEED PATCH—Associated's DiGiorgio 1, 3-31-29, td 5501 ft, plug 5290 ft. Swab water, trace oil.

KINGS COUNTY

ALPAUGH—Trico O & G Co.'s Magee & Stone 1, 36-24-22, td 2584 ft to cement 8⅝ in 2560 ft.

PYRAMID HILLS—General's Martin 1, 20-24-18, rig.

TULARE COUNTY

TERRA BELLA—Baker-Grover Co.'s No. 1, 10-23-27, td 1604 ft, plug 1300 ft, wocs 10¾ in 1187 ft.

MISCELLANEOUS

FRESNO COUNTY—Russ Oil Syn.'s No. 1, 28-12-11, sd 5015 ft.

HUMBOLT COUNTY—Texas Co.'s Eureka 1, 1-3-2, dr shale 3825 ft.

MADERA COUNTY—Pure Oil Co.'s Chowchilla 1, 7-10-14, dr sandy shale 8400 ft.

SACRAMENTO COUNTY—Great American Pet. Co.'s Howard 1, 25-2-8, r, td 2960 ft.

SAN JOAQUIN COUNTY — Amerada's F. L. D. 1, 15-2-5, rig.

SUTTER COUNTY—Buttes Oilfields No. 2, 35-16-1, td 7013 ft, showing oil and gas.

TEHAMA COUNTY—Northern Counties' Pet. Co.'s Ewers-Mooney 1, 25-24-3, td 2360 ft.

SANTA BARBARA COUNTY

GOLETA—Shell Oil Co.'s Bishop 1, 20-4-28, dr 6506 ft.

LOMPOC—Lompoc Pet. Co.'s Beauterbough 2, 18-7-34, td 2975 ft, wocs 7-in 2570 ft.

NAPLES—Power & Snow's No. 1, 7-4-29, dr shale 5675 ft.

SISQUOC—Royalty Service Corp.'s Sisquoc 1, 35-9-32, abn 4500 ft.

SUMMERLAND—Ortega Oil Co.'s Williams 1, 16-4-26, sd 4583 ft.

SAN LUIS OBISPO COUNTY

SEE CANYON—Farrell Pet. Co.'s No. 1, 18-31-12, sd 1420 ft.

CHOLAME—O. L. Willett's Jack 2, 10-25-15, sd 3560 ft.

VENTURA COUNTY

BARDSDALE—El Rancho Oil Co.'s Elkins 1, 9-3-19, rur. Daniel Fisher's Elkins 1, 5-3-19, sd 762 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

* —*dry hole abandoned well.*
‡ —*salt water (completions).*
† —*junked and abandoned.*
¶ —*million feet of gas.*
abd —*abandoned.*
bbls —*barrels.*
br —*building rig.*
b.s. —*basic sediment.*
csg —*casing.*
co —*cleaning out.*
dd —*drilling deeper.*
dk —*derrick.*
dr —*drilling.*
fsg —*fishing.*
ft —*feet.*
hfw —*hole full of water.*
in —*inches.*
lcn —*location.*
m —*milling.*
mim —*moving in materials.*
mit —*moving in tools.*
mot —*milling on tools.*
n, s, e, w, —*north, south, east, west.*
oih —*oil in hole.*
owdd —*old well drilling deeper.*
owpb —*old well plugging back.*
pb —*plugged back or plugging back.*
r —*reaming.*
rog —*rig on the ground.*
rur —*rigging up rotary tools.*
rust —*rigging up standard tools.*
sd —*shut down.*
sdtr —*sidetracking.*
sg —*show gas.*
si —*shut in.*
so —*show oil.*
so & g —*show oil and gas.*
spd —*spudding.*
sr —*straight reaming.*
sw —*salt water.*
td —*total depth.*
ur —*underreaming.*
wih —*water in the hole.*
wo —*workover.*
wocs —*waiting on cement to set.*
wosr —*waiting on standard rig.*

LAS POSAS—Las Posas Pet. Co.'s Mahan 1, 22-3-20, dr shale 7585 ft.

OJAI—Continental's Pirie 1, 12-4-23, td 1543 ft, 8⅝-in recemented 1534 ft.

RINCON—Woodrow Pet. Corp.'s Woodrow 1, 4-3-24, sd 7615 ft.

SANTA PAULA—Edw. M. Lesperance's Boosey 1, 31-4-20, sd 570 ft. J. W. Mosher's No. 1, 22-4-21, sd 2290 ft.

SANTA SUSANA—E. N. Dakes' No. 1, 6-2-17, sd 300 ft.

SESPE—Merchants Pet. Co.'s Cochran 4, r, td 2020 ft. Supreme Oil Co.'s No. 1, 1-4-20, bldg roads.

SHIELL'S CANYON—Texas Co.'s Shiells 128, 4-3-19, co 4280 ft, td 5435 ft.

SIMI—Dawson Oil Co.'s No. 1, 8-2-17, td 1855 ft, wocs 8⅝-in 1510 ft.

TORREY CANYON—A. N. Macrate's No. 1, 32-4-18, rigging to deepen, td 4038 ft.

SOUTHERN CALIFORNIA

ATHENS—F. A. Speik's Johnson 1, 2-3-14, dr sand streaks shale 5066 ft.

ARTESIA—Vanco Dev. Co.'s Millard 1, 25-3-12, sp sd.

BREA CANYON—Pressel-Perry-Tull's Baird 1, 30-2-9, sd 4145 ft.

CARBON CANYON—Tehama Pet. Corp.'s Kramer 1, 33-2-8, sd 2698 ft.

CHATSWORTH—Marble Inv. Co.'s Deer Lake 1, 6-2-16, sd 2600 ft.

FAIRVIEW—Explorers Dr. Co.'s Norris 1, 9-6-10, co 960 ft.

HAWTHORNE—Lennox Oilfields Co.'s No. 1, 4-3-14, foundations.

HERMOSA BEACH—Corneil Oil Corp.'s No. 1, 31-3-14, co 3900 ft. Aron H. Hover's Bryant 1, 31-3-14, pumping oil and water 4200 ft.

HUNTINGTON BEACH, on tidelands—Black Eagle Oil Co.'s No. 1-B, permit 194, 32-5-11, wocs 5 in 4265 ft, td 4702 ft.

MANHATTAN BEACH—Bethlehem Explor. Co.'s Martin 1, 30-3-14, dr 5625 ft.

NEWPORT—Piatt & Collins' No. 1, 14-6-10, td 2574 ft to resume.

PICO—Frontier Oil Co.'s No. 1, 12-2-14, dr shale 1690 ft.

PUENTE—N. O. Shivley's Rowland 1, 23-2-10, to set casing 2400 ft, td 3145 ft.

SAUGUS—Barstow Oil Co.'s Walker 1, 35-5-16, sd 2300 ft. International Oil Developer's Powell 1, wocs 8⅝ in 1953 ft, td 4335 ft.

SURF—B & B Oil Co.'s B.B. 1, 19-6-10, sd 4675 ft.

RIVERSIDE COUNTY—Corona Oil Co.'s Wardlow 1, 27-3-7, rur. Great Coastal Oil Corp's No. 1, 35-5-5, sd 829 ft, equip moved out.

SAN DIEGO COUNTY—J. J. Stevens' No. 1, 27-18-2, dr hard sand 1200 ft.

KANSAS

BARBER COUNTY—Southern Drilling Co. et al's Davis 1, sw se ne 13-34s-15w, sd 2960 ft.

BARTON COUNTY—Atlantic Oil Co.'s Vaniman 1, csw ne 15-20s-12w, fsg 4722 ft. Treleaven & Brimm et al's Haas 1, sw sw sw 30-18s-15w, td 3613 ft, flowing by heads 251 bbls oil 24 hrs. Lario Oil & Gas Co. et al's Nuss 1, nw sw sw 11-16s-14w, lcn. D. I. Hall et al's Arnold 1, se sw 19-18s-15w, mit. Wolf Creek's Kraft 1, sw sw sw 26-16s-11w, rig. Suppes & Witts' Hayes 1, sw sw sw 6-16s-14w, lcn. McMorrow & Spencer's Hagen 1, ne ne ne 33-20s-11w, mim.

BUTLER COUNTY—Gaines et al's McKinley 1-A, ne ne sw 19-29s-4e, td 1950 ft, reacidizing. Hay & Cameron's Johnson 1, nw nw se 16-26s-6e, lcn. Trees & Harwood's Henley 1, sw se ne 7-24s-8e, br.

CLAY COUNTY—Seidel Brothers' Younken 1-A, cs½ se nw 21-9s-4e, set 5-in liner 1635 ft, td 1730 ft, co.

COWLEY COUNTY—Lassen's Ferguson 1, se se nw 21-30s-8e, 1000 gal acid & pumped 60 bbls oil. A. McCoy's Brandenburg 1, sw sw se 17-34s-5e, br.

DICKINSON COUNTY—Dutch Oil Co.'s Phillips 1, cne nw 15-15s-1e, sd 2703 ft.

ELLSWORTH COUNTY—Carter Oil Co. et al's Teubner 1, se se nw 26-17s-9w, dr 1815 ft. Pryor & Lockhart et al's Gregory 1, se se se 19-16s-8w, ru. Lario Oil Co. et al's Wright 1, sw sw ne 17-16s-8w, lcn. Lario Oil Co. et al's Central National Bank 1, se se nw 33-15s-8w, lcn.

HARVEY COUNTY—H. H. & S. Oil Co.'s Frizzle 1, ne ne se 31-23s-2w, cellar.

KINGMAN COUNTY — Sam Jarvis et al's Morrissee 1, csw ne 23-30s-10w, rig.

McPHERSON COUNTY—Lario Oil & Gas Co.'s Schrag 1, nw se sw 22-19s-4w, hfw 3271-3285 ft, ur 6-in csg 3475 ft. Stafford et al's Krehbiel 1, nw nw se 27-21s-3w (owdd), co 2080 ft. Lario Oil & Gas Co.'s Base 1, sw sw sw 22-20s-2w, hfw 3067 ft, dr ahead. Palmer Oil Corp.'s Swenson 1, ne ne sw 11-18s-3w, ru. Brosius et al's Hanson 1, ne ne sw 15-17s-2w, br. Shell Pet. Corp.'s Wenger 1, ne ne ne 2-20s-1w, rog.

OSAGE COUNTY—Jim Edwards' Deitrick 1, cnw se 21-14s-15e, dr 560 ft.

NESS COUNTY—Texas Co. & Gypsy Oil Co.'s Goodman 1, csw sw 21-19s-23w, set 6-in csg 4461 ft, set 5-in csg 4560 ft, hfw 4560-4565 ft, ur 5-in csg 4589 ft. Phillips Pet. Co.'s Young 1, cnw sw 13-18s-21w, cellar.

PRATT COUNTY—Atlantic Oil Co.'s Prentice 1, cse nw 18-28s-14w, td 4798 ft, D & A.

RENO COUNTY—Privett Drilling Co.'s Crotts 1, ne nw ne 27-26s-10w (owdd), sso 3477-3481 ft, ur 8-in csg 3489 ft. Johnson & Carey et al's Dyck 1, se ne se 35-22s-5w, cored 3916-3985 ft, set 6-in csg 3968 ft, wocs. Kessler-Thier & Skelly's Bigger 1, ne se sw 29-23s-6w, dr 3835 ft. Bradley's Olmstead 1, sw sw sw 22-22s-7w, mim.

RICE COUNTY—Yingling et al's Maupin 1, nw sw sw 1-18s-8w, hfw 3348-3354 ft, D&A. Allison & Fitzwilliams et al's Stumps 1, nw nw sw 4-18s-10w, set 12-in csg 1460 ft, co. Foraker-Nickerson et al's Lyon 1, se se ne 27-20s-8w, hfw 2335-2340 ft, ur 10-in csg. Vickers Pet. et al's Gouldner 1, se ne nw 16-18s-9w, ru. Langston et al's Markle 1, ne ne sw 1-20s-9w, sd 3003 ft. Day's Mason 1, nw ne ne 28-21s-7w, mim. Gypsy Oil Co.'s Keesling 1, nw nw sw 10-20s-9w, set 9-in csg 217 ft, dr 1210 ft.

ROOKS COUNTY—Stearns-Streeter et al's Hoskins 1, se sw se 34-9s-16w, hfw 3199 ft, to pb. Carman & Hershey's Nelson 1, nw nw ne 27-10s-16w, br.

RUSK COUNTY—Flynn et al's Hartman 1,

sw se nw 4-18s-16w, rig. Lario Oil & Gas Co. & Phillips Pet. Co.'s Benbow 1, nw ne ne 12-17s-19w, fsg 3185 ft.

RUSSELL COUNTY—Lario Oil & Gas Co. et al's Moore 1, se se nw 34-13s-12w, dr 3005 ft. J. Brouk & R. D. Bailey's Kluesner 1, nw nw se 34-15s-12w, rig. Hartman & Blair's Gurney 1, se nw 23-14s-14w, potential 359 bbls oil, comp. Wolf Creek et al's Donovan 1, sw sw se 10-15s-15w, 700 ft oih 3195-3200 ft in 3 hrs, no test. ElDorado Refining Co.'s Walz 1, se ne nw 29-13s-11w, set 10-in csg 2090 ft, sd. Hartman & Blair's Krause 1, ne nw nw 5-15s-15w, dr 1960 ft. Wolf Creek et al's Penn Mutual 1, sw sw sw 22-15s-15w, cellar. Hartman & Blair's Furthmeyer 1, ne ne ne 19-12s-13w, set 10-in csg 795 ft, dr 1150 ft. Hartman & Blair's Garrett 1, sw sw nw 24-13s-12w, mim. Murphin's Funk 1, sw sw sw 19-12s-13w, spd & sd. Reserve et al's Moore 1, cnw nw sw 15-13s-12w, cellar. Hartman & Blair's Hildebrandt 1, nw ne sw 12-14s-14w, lcn. Hartman & Blair's Sullivan 1, ne ne se 2-14s-15w, set 6-in csg 3060 ft, hfw, no test.

SALINE COUNTY—Dieter et al's Herrington 1, ne nw se 3-13s-1w, set 8-in csg 2430 ft, hfw, dr 2585 ft.

SEDGWICK COUNTY—Allison & Fitzwilliams' Struthers 1, ne sw sw 34-28s-2w, fsg 3295 ft. Syndicate O&G Co. et al's Ratzlaff 1, ne nw nw 30-26s-2e, ur 8-in csg 3520 ft. Aladdin Petroleum et al's D. Lauck 1, se ne nw 21-28s-2e, sg 2440 ft, set 8-in csg 2627 ft, dr 2655 ft. Magnolia Pet. Co.'s Bartholomew 1, se se sw 30-27s-4w, dr ahead.

STAFFORD COUNTY—Atlantic Oil Co. & Phillips Pet. Co.'s Guthrie 1, cnw nw 15-25s-11w, set 8-in csg 3191 ft, 1 bbls water 3215-3220 ft, 3 bbls water 3330-3345 ft, dr 3345 ft. Atlantic Oil Co.'s Hohner 1, nw se se ne 31-23s-14w, running 7-in csg 4077 ft. Lario Oil & Gas Co. et al's Tudormorgan 1, se se nw 23-24s-13w, lcn.

SUMNER COUNTY—Foraker et al's Hiett 1, se sw ne 34-34s-4w, sd 1285 ft. Tom Palmer's Wentworth 1, nw nw ne 9-35s-2e, set 6-in csg 3182 ft, dr 3305 ft. D. J. Wilson et al's Clark 1, csl nw 15-35s-1w, mim. Wakefield et al's Newton 1, se se se 21-30s-2e, rog.

TREGO COUNTY — Central Commercial Drilling Co.'s Wagg 1, nw nw se 17-13s-21w, fsg 1600 ft. A. D. Morton's Jones 1, se se se 20-12s-23w, rig.

OKLAHOMA

ATOKA COUNTY—H. F. Potts' Nichols 1, sw sw nw 32-2s-9e, fsg 1200 ft. Malernee et al's D. K. O. Land Co. 1, cse se 35-2s-13e, sd 3115 ft.

BECKHAM COUNTY—Fred Coogan et al's Shelton 1, sw sw sw 33-10n-25w, dr 735 ft.

BRYAN COUNTY—C. B. Welch's M. Collins 1, sw sw nw 19-8s-8e, mach. Trio Oil Co.'s Gilbert 1, se se se 25-8s-7e, mach.

CADDO COUNTY—H. W. Lee et al's Stacey Ferrel 1, sw ne ne 3-6n-13w, dr 1960 ft. Denver P & R Co.'s Noe 1, nw sw sw 34-10n-10w, est 200 bbls oil 48 hrs.

CARTER COUNTY—Carter Oil Co.'s Humble-Williams 3, sw ne sw 27-2s-3w, dr 2865 ft. Waco Turner's A. F. Munson 1, ne nw ne 35-5s-2w, mir.

CLEVELAND COUNTY—Sinclair Prairie Oil Co.'s Franklin Community 1, se nw se 21-10n-2w, dr 2257 ft.

COAL COUNTY—W. A. Delaney's Diamond 1, nw nw se 5-1s-8e, dr 2477 ft.

COMANCHE COUNTY—F. F. Stevens' Green 1, se se sw 2-1n-13w, dr 1280 ft. H. W. Baker's Miller 1, se sw se ne 22-2n-13w, sd 120 ft. Henry Rosenthal et al's Au-chi-re-ah 1 "B," nw nw nw 5-1n-9w, dr 1401 ft. Oscar Jones' Sheetz 1-A, ne ne sw 26-3n-10w, mach.

GARFIELD COUNTY—Herndon Drilling Co. et al's Allen 1, cne ne sw 35-24n-3w, td 100 ft.

GARVIN COUNTY—National Producing Co.'s Littrell 1, ne ne ne 31-2n-3w, dr 1203 ft. Anderson-Kerr Drilling Co.'s Riley 1, se se nw 2-4n-1w, dr 5710 ft. George L. Pace's Smith 1, sw sw ne 35-1n-1e, lcn. Charles E. Carter et al's Wood 1, nw sw se 5-4n-3e, sd 480 ft.

GRADY COUNTY—Carter Oil Co. & Magnolia Petroleum Co.'s Harrison 1, cnw nw 28-3n-5w, plugged and abd 8963 ft.

GRANT COUNTY — Helmerich - Payne's Crouse 1, cne sw 29-25n-8w, td 6036 ft, rust.

GREER COUNTY—Fred Morgan et al's H. G. Carder 1, csw se 19-4n-22w, lcn.

HUGHES COUNTY—Freeman et al's Kite 1-A, nw nw ne 8-6n-10e, set 5-in csg 598 ft, wocs. Dandridge & Crane's Mead 1, nw nw ne 17-5n-9e, dr 950 ft. Turner et al's Williams 1, csw sw sw 35-7n-10e, sd 538 ft. Amerada Petroleum Corp.'s Adams 1-A, ne ne sw 31-9n-9e, rig.

JACKSON COUNTY—Palo Duro Oil Co.'s Ealum 1, se se sw 16-2n-21w, td 345 ft, repairing. Scheig's James 1, ne ne ne 23-1n-20w, dr 1560 ft. Associated Oil Co.'s Harrell 1, ne ne sw 13-1s-21w, dr 150 ft. Selby Oil Co.'s R. C. Holt 1, se se sw 15-2n-20w, lost hole 965 ft, skid rig 60 ft west, set 15-in csg 60 ft, dr 75 ft. Petroleum Prod. Co.'s Cole 1, sw sw se 34-2n-20w, est 8 bbls oil per hr, dr 1445 ft. Whatley & Whatley's Holt 1, nw sw se 20-1n-20w, lost hole 865 ft, skid mach 10 ft south. Scheig et al's C. W. Cole 1, ne se se 5-1n-20w, dr 285 ft. A. H. Emenhiser's Murrell 1, se sw se 17-3n-21w, spd & sd.

JEFFERSON COUNTY—Farlyn Oil Co.'s Seay 28, nw se se 3-7s-5w, dr 100 ft.

KAY COUNTY—Harris-Haun's Schuessler 1, cnw sw 3-28n-2e, repairing rig. Max Kelly's Spore 1, nw nw se 17-27n-2e, lcn.

KINGFISHER COUNTY—Black Gold Pet. Co.'s Cole 1, csw ne 24-18n-5w, dr 6129 ft.

LINCOLN COUNTY—Charles Balph et al's Young 1, cn½ nw nw 23-15n-5e, sd. Slick-Urschel et al's Miller 1, nw nw se 25-15n-3e, dr 2730 ft. Sinclair Prairie Oil Co.'s Hoyt 1, nw sw ne 5-14n-3e, pumped 155 bbls oil.

LOGAN COUNTY—Sinclair Prairie Oil Co.'s School Land 1, se se se 36-17n-1w, td 5335 ft, rust & sd. Shell Petroleum Corp. et al's Hirzel 1, se sw sw 7-16n-2w, cored 5479-5495 ft. Slick-Urschel's Pennington 1, csw ne 10-16n-1w, dr 2585 ft. J. C. Shaffer et al's Watson 1, cnw ne 15-15n-4w, set 15½-in csg 207 ft, wocs. Helmerich-Payne et al's Sturgis 1, se se nw 1-15n-2w, cored 6165-75 ft, td 6175 ft, D & A. Sinclair Prairie Oil Co. & Slick-Urschel's Koatsch 1, sw sw sw 23-15n-3w, set 15½-in csg 147 ft, dr 1925 ft.

LOVE COUNTY—Amerada Petroleum Corp. & Stanolind Oil & Gas Co.'s Westheimer & Daube 1, nw se se 27-6n-2e, dr 1620 ft.

MARSHALL COUNTY—Paul R. Robb's Vittetoe 1, cne se 11-5s-4e, dr 5094 ft.

McCURTAIN COUNTY—J. V. Schrivner et al's Central Life Association 1, ne sw sw 24-6s-21e, sd.

MURRAY COUNTY—Equitable Oil & Gas Co.'s Scott 1, csl n½ nw sw 15-1s-3e, dr 864 ft. Manahan Oil Co.'s Ward 1, ne se nw 18-1s-3e, dr 550 ft. C. P. Williams' Singleterry 1, se sw nw 25-2s-3e, mach moved out. Gillette & Kroeger's Robbins 1, ne ne se 31-1n-6e, rog. Equitable Oil & Gas Co.'s Baer 1, sw nw nw 21-1s-3e, cellar.

NOBLE COUNTY—Marathon Oil Co.'s Gilbert 1, ne ne ne 24-22n-2e, sd 4480 ft.

OKFUSKEE COUNTY—Mid-Continent Pet. Corp.'s Haney 1, sw se ne 24-12n-8e, 1 million gas 3962 ft, 3 million gas 3976 ft, est 1 bbl water daily, dr 4015 ft. Amerada Pet. Corp. et al's Jaynes 1, nw nw sw 20-10n-10e, dr 3229 ft.

OKLAHOMA COUNTY—R. Carl Larkin's Brobine 1, sw sw ne 33-13n-5w, rig. Anderson & Kerr et al's Linn 1, sw sw nw 17-14n-2w, lcn. W. H. Atkinson et al's Reed 1, ne ne ne 4-12n-3w, rur.

OSAGE COUNTY—Peters Pet. & Norbla Oil Co.'s 1, sw sw sw 15-25n-5e, sd 3134 ft.

PAYNE COUNTY—Marathon Oil Co.'s Potts 1, csw sw 27-19n-2e, td 5116 ft, pb 4540 ft, woc, set 6-in csg 4489 ft, to test.

PITTSBURG COUNTY—McAllister Pet. Co.'s Chunn 1, se se nw 29-4n-14e, set 12-in csg 1530 ft, collapsed, sd. Hailey et al's Smithson 1, nw nw nw 35-6n-12e, abd. P. H. Gray et al's Lee 1, nw nw se 12-5n-13e, dr 880 ft.

PONTOTOC COUNTY—J. D. Sledge & Jack Lynch's Thompson 1-A (twin), sw ne sw 1-1n-7e, hfw 4547 ft, 225 ft oil on top, 1¼ bailer oil 6¼ hrs, shot 165 qts 4300-4380 ft, collapsed pipe, sd. Southern Oil Corp.'s Ladd 1, cnw nw 27-3n-7e, set 15-in csg 2365 ft, dr 2403 ft. Paramount Oil Co.'s Graham 1, sw se sw 13-1n-2e, set 6-in csg 2868 ft. H. M. Mafcum's Magnuson 1, sw se se 23-2n-7e, sd 1755 ft. Mudge Oil Co.'s Clampett 1, sw nw nw 10-2n-6e, reaming hole. Southern Oil Corp.'s Vierson 1, ne ne se 17-3n-7e, mach. Crabb-Craw Oil Co.'s Breco 1-A, se ne sw 3-4n-6e, testing. Southern Oil Co.'s Walker 1, nw nw sw 11-4n-6e, sd 820 ft. Crabtree's Chandler 1, ne se sw 4-5n-6e, sd. Gillette & Kroeger's Duver 1, nw nw se 36-1n-6e, dr 1162 ft.

POTTAWATOMIE COUNTY—C. W. James et al's Neal 1, nw se sw 4-5n-3e, set 8-in csg 3335 ft, bailing.

PUSHMATAHA COUNTY—William Ungerman et al's Messer 1, se sw sw 35-3s-18e, (owdd), td 2795 ft, 600 ft oih.

SEMINOLE COUNTY—Verser & Clay's Thomas 1, ne se nw 1-6n-6e, sd 2802 ft. Ray Dorris & J. T. Hall's Dorris 1, se se sw 31-10n-7e, sd 281 ft. Wofford Drilling Co.'s Abbott 1, ne ne ne 33-8n-7e, rig. Wofford Drilling Co. et al's Thomas 1, nw nw se 8-6n-7e, sd 2835 ft. Atlantic Oil Co.'s Thompson 1-A, sw se se 15-11n-8e, dr pipe stuck 3800 ft.

STEPHENS COUNTY—Wm. Angle's Calloway 1, se se ne 17-1n-8w, lcn. J. W. Madison's Tussey 1, sw se nw 24-1n-1w (owdd), rig down & dr pipe in hole, sd.

WASHITA COUNTY—Anadarko Basin Oil Co.'s Ash Wolf 1, ne ne sw 23-9n-17w, ru & sd.

WYOMING

BIG HORN COUNTY—California Exploration Co.'s Government 1, csw sw 4-54n-94w, Spence Dome, spd. Yale Oil Corporation's Blakesley 1, ne ne nw 28-49n-91w, dr 863 ft. Wyoming Oil & Refining Co.'s Evans 1, ne ne nw 12-49n-91w, rust.

CARBON COUNTY—Argo Oil Co.'s Johnston-Union Pacific 1, ne ne se 5-24n-87w, pb from 3500 ft, where test encountered 3000 ft of water in Sundance, will test Muddy at 2835-47 ft. Earl W. Reader, Inc.'s Whitford 1, sw se se 24-20n-84w, coring sandy shale at 3326 ft. Reader's Union Pacific 1, csw sw 19-20n-83w, rur 1530 ft. Ohio Oil Co. and California Co.'s Kyle 1, ne se ne 26-21n-79w, dr 4301 ft. Ohio Oil Co.'s Morris 1, cnw se 6-20n-77w, dr 6326 ft.

FREMONT COUNTY—Mid-American Oil Co.'s Government 2, cne sw 14-28n-92w, running 8¼-in csg to 1640 ft.

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COLORADO

LINCOLN COUNTY—Consolidated Smelting & Metals Corporation's Hancock 1, nw nw se 7-17s-52w, dr 1050 ft.

PROWERS COUNTY—Trojan Oil & Gas Co.'s Lotus 1, nw ne ne 15-23s-46w, Lamar district, cemented off cave and wocs 4843 ft.

NEW MEXICO

CHAVES COUNTY—Commanche Drilling Co.'s Sloop-Purcell 1, ne se 10-11s-36e, abd 1583 ft in black lime.

EDDY COUNTY—Coronado Oil Co.'s Anderson 1, cne nw 13-20s-23e, dr at 641 ft in lime. Getty Oil Co.'s Dooley 7, sw nw 24-20s-29e, Twin Hills structure, rur 230 ft.

EDDY COUNTY—Geo. F. Getty Oil Co.'s Andrew Dooley 7, swc nw 24-20s-29e, 6000-ft test, elev 3309 ft, sd 230 ft.

LEA COUNTY—Amerada Pet. Corp.'s State 1-D, c nw nw 1-20s-36e, elev 3590 ft, top anhydrite 960 ft, logged salt 1060-2255 ft, so 3495-98 ft, cem 7-in cas 3760 ft, tested in sandy-lime 3895 ft, swab and flowing 250 bbls oil daily. Anderson-Prichard Oil Corp.'s Fisher 1, c se ne 8-20s-35e, lcn. Anderson-Prichard & Repollo Oil Co.'s B. W. Arnold 1, swc nw se 11-20s-38e, sd 464 ft. Argo Royalty Co.'s Byrl A. Burner-Texas Co. 1, near c ne ne 6-20s-32e, elev 3513 ft, dr 900 ft. E. B. Guess et al's C. W. Justis 1, swc nw nw 20-25s-37e, sd 1060 ft. R. H. Henderson et al's P. J. Langley 1, c se se 8-25s-37e, elev 3162 ft, sd 375 ft; Russell-Steele 1, c ne nw 24-20s-33e, elev 3627 ft, dr 1990 ft. Humble's J. L. Coates 1, c nw ne 10-24s-36e, elev 3383 ft, top brown lime 2996 ft, junked gasser, td 3355 ft, sd for relief well to kill and abn; Coates 1-A, elev 3385 ft, dr 210 ft; F. M. Saunders 1, c ne ne 4-22s-34e, elev 3641 ft, dr 950 ft. Maljamar O&G Corp.'s P. Miller 1, c nw sw 23-17s-32e, mim. Nat'l Securities Oil Corp.'s V. Linam 1, nec s½ sw 33-18s-37e, elev 3712 ft, top anhydrite 1580 ft, logged salt 1716-2650 ft, top lime 2956 ft, dr lime with 3000 ft fluid, 95% bs&w, below 4295 ft. Ryan Consolidated Pet. Corp.'s Acree 1, c ne nw 35-20s-32e, elev 3568 ft, dr 2685 ft. Shell Pet. Corp.'s State-Endura 1, c se ne 12-21s-35e, elev 3588 ft, top anhydrite 1453 ft, logged salt 1533-2865 ft, top lime 3020 ft, swab 50 bbls sulphur w per hour at 4372 ft, dd to 4404 ft, fsh tubing. The Texas Co.'s Anna C. Moore 1, c nw se 21-20s-32e, elev 3508 ft, tested 500 ft sulphur w in lime 2880-2885 ft. The Texas Co.-Amerada & Columbian Carbon Co.'s Parker 1, c nw nw 29-26s-37e, rig. W. L. Todd and The Texas Co.'s Fred Cole 1, c ne ne 35-19s-33e, rig. Sam K. Vierson & Brown's W. D. Robinson 1, c nw se 14-11s-32e, elev 4355 ft, rig.

EAST TEXAS

ANDERSON COUNTY — Gulf's Mary J. Ross 1 (54.7-ac), Robt. Erwin sur, Camp Hill area, elev 484 ft, so 478-552 ft, dr 2650 ft; O. G. Rogers 1 (475-ac), E. Parker sur, dk. J. W. Luttes et al's C. M. McKee 1 (100-ac), Walter F. Pool sur, 3 mi se of Frankston, dk. Tide Water and Texas Seaboard's N. N. Wills 21-A, Cayuga field Trinity test, dr 4650 ft. Joe A. Worsham et al's W. F. Wathen 1 (80-ac), B. Towles sur, nw of Cayuga field, mim.

BOWIE COUNTY—Tex-Ark Oil Co.'s J. B. Hamilton 1 (40-ac), Jessie Milam sur, elev 272 ft, testing os 65 to 95 ft.

CASS COUNTY—A. D. King, Tr. and E. S. White's G. W. Allday 1 (40-ac), R. F. Whittaker sur, 4 mi ne of Linden, elev 288 ft, dk.

CHEROKEE COUNTY—Jacksonville O&G Corp.'s H. D. Henderson 1 (40-ac), J. Pineda sur, elev 409 ft, sd 693 ft. Killough et al's J. S. Strickland 1 (40-ac), Urian Moore sur, 7 mi nw of Jacksonville, elev 433 ft, sd 3510 ft, changing rig. E. M. Thomason & Co.'s W. J. Addis 1 (80-ac), Jessie T. Jones sur, elev 471 ft, sd 3370 ft.

FREESTONE COUNTY — Amerada Pet. Corp.'s H. Berk 1 (1057-ac), E. G. Rector sur, Cayuga area, sp and sd. F. A. Gillespie & Son's J. B. H. Orand 1 (50-ac), W. M. C. Jones sur, 1¾ mi n Fairfield, Pecan chalk 2648-2804 ft, Austin chalk 3610-3970 ft, dr 4345 ft. J. A. Hoover and R. J. Bain's W. W. McFall 1 (65-ac), S. Garrison sur, lcn.

GREGG COUNTY—O. T. Clark et al's T. G. Williams 1 (100-ac), David Hill sur, 3 mi ne of Longview, elev 426 ft, Pecan chalk 2391-2985 ft, top Austin chalk 3447 ft, dr chalk 3525 ft.

HENDERSON COUNTY—Great State Oil Corp.'s R. Sid Ansley 1-A, N. B. Thompson sur, elev 268 ft, sd 1000 ft. Pioneer Exploration Co.'s Mrs. Anne Gentry 1, C. M. Walters sur, 3 mi w of Athens, elev 382 ft, Pecan chalk 2393-2556 ft, dr Eagleford shale 3955 ft. Taubert & McKee (was Crosby & Culp's) M. T. Dodd 1 (160-ac), Geo. Aldrich sur, 4 mi e of Malakoff, elev 376 ft, Pecan chalk 2390-2504 ft, Austin chalk 3456-3610 ft, tested dry and sd 4049 ft.

HILL COUNTY—Humble's M. Holderman 1 (80.7-ac), C. Sullivant sur, 1 mi w of Mount Calm, mim.

HOPKINS COUNTY—D. A. Hale et al's L. N. Hall 1 (70-ac), A. Caro sur, A-143, elev 506 ft, sd 1492 ft.

HUNT COUNTY—D. T. Cauble et al's Y. B. Reed 1 (220-ac), F. Thweatt & C. B. Payne sur A-1054, 3 mi se of Greenville, top Gober chalk 1400 ft, base Austin chalk 2088 ft, dr 2250 ft. Julian C. Hall et al's A. P. Parrish 1 (100-ac), (s) Nancy Danley sur, lcn. H. G. Samson and Shawver et al's J. R. Phillips 1 (53 1/3-ac), W. L. James sur, top Gober chalk 550 ft, top Austin chalk 1113 ft, sd 1300 ft.

KAUFMAN COUNTY—G. H. Germany et al's D. Clark-W. S. Kirby 1, S. Edens sur, sd 1728 ft. L. P. Kean et al's J. B. Hunter 1, R. Sowell sur, 4 mi s of Terrell, elev 453 ft, top Austin chalk 1785 ft, sd 2875 ft. Murray and Emerson's G. W. Martin 1 (100-ac), W. F. C. Butler sur, 2 mi ne of Kemp, sp and sd.

LIMESTONE COUNTY—C. F. Carter et al's S. E. Dean 1 (75-ac), Pedro Varella sur, 3½ mi sw of Mexia, sd 1717 ft. David J. Crawford et al's Vol DeLong 1 (59.3-ac), Pedro Varella sur, 2½ mi n of Thelma, estimated 640,000 ft gas with spray sw, td in Woodbine 2807 ft. Dan H. Daugherty et al's Sallie Welch

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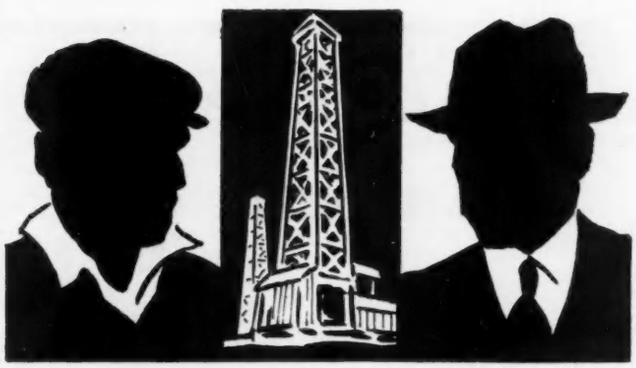

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1 (94-ac), Pedro Varella sur, top Nacatoch sand 834 ft, sd 1803 ft. Leland Fikes et al's A. J. Williams 1 (20-ac), Pedro Varella sur, lcn. J. Edward Mills et al's J. B. Hunt 1 (34¼-ac), Israel Woods sur, 3 mi ne of Kosse, Pecan chalk 2010-2137 ft, top Austin chalk 2985 ft, sd 3185 ft.

MORRIS COUNTY—C. M. "Dad" Joiner et al's Reese 1, T. C. Ry. sur, top Pecan chalk 2000 ft, temp abn in sandy-shale 3540 ft. Watson et al's P. M. Staggers 1, J. D. Nelson sur, co to set cas, td 4259 ft.

NAVARRO COUNTY—W. J. Keeling Estate & Peyton Bros.' J. F. Rushing 1 (84-ac), Henry Ford sur, 6 mi w of Currie, elev 530 ft, Austin chalk 2155-2395 ft, top Woodbine 2858 ft, co 2880 ft. L. N. McCulloch et al's Berry Bros. 1 (35-ac), W. W. Moss sur, sd 625 ft. Wm. C. McGlothlin et al's M. A. Dobbins 1 (138-ac), E. Lowry sur A-476, 2 mi n of Corsicana, sd 860 ft. McGlothlin & McCarter's H. A. Barnett 1 (355-ac), Elisha Powers sur, se part of county, rig. Wiggins et al's D. A. Donoho 1 (63½-ac), John Cauple sur, 2 mi sw of Corsicana, rig.

RED RIVER COUNTY—J. S. Abercrombie & Harrison Oil Co.'s J. M. Roberts 1 (100-ac), John Ware sur, 8 mi n of Clarksville, elev 424 ft, top Woodbine 450 ft, top Georgetown 744 ft, dr shale 1965 ft, top anhydrite 1904 ft. J. E. Dinger Oil Co.'s W. T. Norris 1 (351-ac), Joseph Guest sur, 1 mi s of Detroit, sp and sd.

ROBERTSON COUNTY — H. L. Patton Co.'s W. H. & H. A. Ely 1 (616-ac), Antonio Manchaco sur, 5 mi se of Hearne, rig. Steen Drlg. Co.-Dr. W. M. Manness' H. A. Sackville 1 (2025-ac), J. M. Viesca sur, dr 4965 ft.

RUSK COUNTY—Ben E. Lamb et al's Haywood Leath 1 (185-ac), L. J. Dooley sur, 2½ mi e of Pirtle, elev 370 ft, Pecan chalk 2418-2793 ft, Austin chalk 3352-3512 ft, swabbed dry, td 3650 ft.

SMITH COUNTY—W. L. Cloud and A. G. Deck's Dora Kendall 1, John Williams sur, 3 mi e of Van field, sd 900 ft.

TITUS COUNTY—Steve Rotunda et al's O. C. Lillianstern 1 (40-ac), W. H. Crawford sur, 5 mi se of Talco, dk.

UPSHUR COUNTY—G. W. Berry et al's D. M. Hollins 1, B. Asher sur, lcn. Russell Tarr et al's J. C. Hall 1 (180-ac), Wm. McFadden sur, 1½ mi nw Kelsey, lcn.

VAN ZANDT COUNTY—J. C. Acree et al's F. W. Anderson 1 (160-ac), John Blair sur, 4 mi n of Wills Point, sd 2065 ft. J. Beren et al's J. R. Bryant 1 (54.44-ac), NCSL sur, sd 1325 ft; Palmer 2, sd 1080 ft. Roy I. Carter & Jennings' S. McGee 4 (43.4-ac), blk 20, Wm. Daniel sur, elev 441 ft, sd 1268 ft. A. J. Delcambre et al's A. Crim 2 (48-ac), sd 1370 ft. S. E. Miller et al's J. M. Palmer 1 (39.1-ac), blk 14, NCSL sur, bailed dry in Nacatoch sand 1180-1188 ft. S. L. Olson, Tr. and Jensen-Olson Oil Co.'s J. D. Listenbee 1 (46-ac), Wm. Daniel sur, sd 1279 ft; Listenbee 2, lcn. Rauch Bros. (Weltex Oil Corp.'s) Bearden-Palmer 1 (61.1-ac), blk 11, NCSL sur, sd 1237 ft. J. K. Wadley et al's W. J. Carnes 1 (588-ac), T. P. Ry. sur A-283, elev 353 ft, Pecan chalk 2432-2648 ft, Austin chalk 3746-4095 ft, top red beds 4637 ft, sd in red beds 4670 ft. Wise & Jackson (Florence Oil Co.'s) Sanger Inv. Co. 1 (50-ac), J. Walling sur, pumping 3 bbls oil with water, td 3040 ft; Sanger 2, elev 471 ft, top Woodbine 2887 to 2925 ft, flowed 28 bbls oil in 30 min via cas.

WOOD COUNTY—Bryant and Speers' Consumers Lignite Co. 1, F. McMahon sur, 1 mi se of Alba, elev 419 ft, dry and abd 1660 ft. R. M. Coleman et al's J. J. Junior 1 (59-ac), Jas. M. Moore sur, 7 mi sw Winnsboro, lcn.

EAST TEXAS BORDER COUNTIES

HARRISON COUNTY—Bergendall, Carroll et al's Buchanan 1, W. M. McIlvain sur, elev 353 ft, 5 3/16-in csg cemtd 3676 ft, dr plug, swabbing with reported sg and so, td 3682 ft. Harralson & Ault's Alma Bell 1 (35-ac), William Patton sur, dk. Cohen & Hunter's W. T. Lovelace 1 (96-ac), W. M. McIlvain sur, lcn. Steve Rowell 1 (58-ac), W. M. McIlvain sur, lcn. Hammonds & Williams' W. T. Cook 1, J. N. Sorrell sur, Pecan Gap 1830-2371 ft, cap rock 2517-18 ft, sg 2518-31 ft, cemtd mixed string 4½ and 5 3/16-in csg 2516 ft, dr plug td 2531 ft (Ozan.)

MARION COUNTY—Ed S. Holman's Henderson A-1, R. Bennington sur, dr 2650 ft, shale. W. H. Oberthier's East Texas Ore & Dev. Co. 1, Walter H. Gilbert sur, sd 3670 ft.

PANOLA COUNTY—Geo. Le Grand's P. J. Laidleigh 1, A. Thompson sur, rur. S. B. Wallace 1, A. M. McLaughlin sur, mim. Neel & Nixon's Rushing 1, Mary Smith sur, rur. G. F. Hudson et al's J. F. Nail 1, C. McCrary sur, dk.

SABINE COUNTY—Ed C. Smith's Hamilton 1, Jno. Haley sur, rur.

SHELBY COUNTY—L. M. Bradley et al's J. J. Ashberry 2, J. M. Mitchell sur, dr 820 ft, shale. O. P. Bush, Tr.'s Pickering Lbr. Co. 1, W. H. Harvey sur, dr 990 ft, shale.

SOUTH TEXAS

ATASCOSA COUNTY—McIntyre et al's H. W. Billimek 1, J. D. Woodlief sur, 4 mi from se corner Wilson County, lcn.

BANDERA COUNTY—W. B. Kyle et al's R. L. Duke 1, J. A. Bennett sur No. 7, prep to ru. Plateau Oil Co.'s R. G. Garrison 1, sec 506, GC&SF sur, dr 1655 ft blk shale.

BASTROP COUNTY — Joe Mills' E. M. Pruitt 1, J. A. Navarro sur, sd 1820 ft.

BEE COUNTY—Dirks Bros.' M. H. Milster 1, 990 ft nl, 4290 ft el of C. B. Shain sur, Ab 305, sw Grayburg pool, set 140 ft sur csg, re-dr; this well, originally known as Earl Calloway; Foley 1, Keeler sur, td 3445 ft, flowed 20 bbls high gravity oil, plenty gas, per day, through ¼ choke, shut in until completion of deal for sale of gas, opens new field. Haines-McMillin Oil Corp.'s Stoltzfus 1, 150 ft nl and el nw¼ sec 14, Ragley sub, J. M. Uranga gr, lcn for 4500-ft test, to spud about March 1. Humble O&R Co.'s Thompson 2, Garret Roche sur, dr 3720 ft. Mid-Tex Pet. Co.'s Travland 1, J. M. Uranga sur, 2½ mi se Normanna, ru. Navarro Oil Co.'s J. E. Roth 1, 330 ft wl, 990 ft el sec 7, Ragley sub, J. M. Uranga gr, second well in Dirks pool and offset to discovery, ru. Neversuch Oil Co.'s Mrs. Rosa Borroum 1, Chas. Baker sur, prep to sp. George Pace's Goree 1, blk 26, Tarver, Henslee sub, T. B. Barton sur, sp. A. P. Pierce, Jr., et al's Sinclair

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et al 1, 330 ft nel and sel of tr, J. M. Uranga gr, 2 mi w Normanna, mim, operations delayed by litigation. Wrightsman Oil Co.'s A. J. Kimball 1, 1450 ft wl, 1100 ft nl S. Winship sur, Grayburg area, lcn. United Prod. Co.'s G. A. Ray 48, W. J. Porter sur, coring 3670 ft. Weiskettle et al's John R. Scott 1, J. M. Uranga gr, test sw 4427-30 ft, dd to 4502, D&A. Worth Oil Co.'s Rutledge 2, B. Q. Hadley sur, dr below 100 ft sur csg. Diamond Half Oil Co.'s Mrs. N. L. McKinney 1, mim materials for test on lcn just north of Tuleta on former Houston Oil Co. tract.

BEXAR COUNTY—C. A. Campbell et al's Margaret Cantu 1, J. M. Arocha gr, dr 1466 ft. N. G. Carter's E. & T. Ruiz 1, F. Rolen sur, sd. Keiffer & Jones' LaGrange 1, F. Rolen sur, sd 586 ft. George O'Neill et al's Holly Crouch 1, M. Gotari sur No. 5, dr 1395 ft. Richcul Oil Co.'s Kohler 1, J. M. Baerrera sur, sd 1324 ft.

BROOKS COUNTY—Helmerick & Payne, Inc.'s Scott & Hopper 1, sur No. 44, Palo Blanco gr, sd 5013 ft for orders, contract depth.

CALDWELL COUNTY—Reedy et al's T. North 1, A. Floyd sur, set 6⅝ in csg 2247 ft, top Austin chalk 2246 ft, testing about 2275 ft. R. Y. Walker's J. M. Pierce 1-B, S. Seal sur, failed to make producer at 2539 ft, to be tp chalk and test.

CALHOUN COUNTY — Stienberger Pet. Corp.'s Shofner 1, A. Esparza sur, sp.

DUVAL COUNTY—Mills Bennett's W. R. Peters 1, 330 ft sl and el nw¼ sec 178, N. Kohler area, dr. Buffalo-Texas Drlg. Synd.'s Escobar 1, San Francisco gr, sd 4010 ft. Continental Oil Co.'s Clara Driscoll Sevier 4-A, sec 448, dst 3422-30 ft, 900 ft oil, 50 lbs. pressure 20 min, set csg, wocs. Eckhart et al's Southerland 1, sec 188, Kohler area, tested dry 2375 ft, sd. Frank Gravis' C. W. Hahl 1, sec 64, sp and sd to dr water well. Intrepid Oil Co.'s (E. R. Thomas) Barr Ranch 1, sec 26, td 4851 ft, test sw, sd for orders. W. L. Pearson et al's H. F. Gromm 1, sec 291, coring 4540 ft. Stieren Oil Corp.'s Philp 2, sec 320, sp.

FALLS COUNTY—Davidson et al's Bozeman 1, M. Pryor sur, sd 2515 ft. C. W. Goeld's W. B. Landrum 1, J. A. Manchaca sur, dr 510 ft.

FRIO COUNTY — Amerada Pet. Corp.'s Halff & Oppenheimer 3, J. H. Gilman sur No. 16, td 3933 ft, pb to casing seat 3916 ft, re-dr to 3921 ft, testing. Shoemaker et al's M. Roach Est. 1, C. Wentzel sur No. 139, near Bigfoot, sand 2365-71 ft, prep for dst.

GONZALES COUNTY—Southwestern Dev. Synd., Ltd.'s W. S. Atkinson 1, S. Y. Reims sur, sp.

GUADALUPE COUNTY—C. W. DeFreest et al's Henry L. Beck 1, n central portion 109.43-ac tr, 1 mi ne Schertz, Malpaz sur, move in spudder. Grayburg Oil Co.'s McKean 13, Cottle sur, dr 1748 ft, with standard tools, 6⅝ in csg set, but not cemented at 1686 ft. L. E. Trout's M. McKee 1, Green DeWitt sur, sd 2935 ft. A. D. Locke's Mrs. N. S. Lowman 1, C. Campbell League, sp. Siedeman's Fee 2, Esnaurrizar sur, set 200 ft sur csg, dr ahead.

HIDALGO COUNTY—W. L. Cleary et al's Brock & Showers 1, lot 8, blk 9, Vista Hermosa sub Por 80, cap 3044-48 ft, sand 3048-56 ft, show oil, prep to make dst, delayed while clearing titles. DMC Oil Co.'s Daskam 1, blk 43, Por 45, dr 2702 ft. King-Woods Oil Co.'s W. M. Doughty 1, Sh 90, San Salvadore del Tule gr, 15 mi n Edinburgh, sd 4630 ft to rep boiler. Nutex Oil Co.'s (Hankamer & Camp) Frank Rabb 1, 330 ft el, 990 ft sl 511-ac tr in Laguna Sesa League, 12 mi nw Edinburgh, set sur csg with spudder at 200 ft, now rur. E. A. Showers et al's Brock & Showers 1, 660 ft nl and el lot 11, blk 18, Por 79, 10 mi nw Mission, rur. Union Sulphur Co.'s American Rio Grande Land & Irr. Co. 3, lot 2082, blk 86, N. Capisallo Dist., Llano Grande gr, dr 4290 ft.

JIM HOGG COUNTY—Magnolia Pet. Co.'s Martinez 36-A, 330 ft sl and el sec 275, Henne-Winch & Farriss area, dr 1475 ft.

JIM WELLS COUNTY—O. W. Killam's W. D. Wade 4, blk D, S. A. Agua Dulce sur, td 4028 ft, flowed sw, re-worked, now flowing oil, no details available. Joe Lundin's T. C. Hewitt 1, 330 ft sl and el sec 51, R. P. Haldman sub, ru. Magnolia Petroleum Co.'s A. A. Seeligson 6, V. Canale sur No. 218, dr below sur csg. Smith & Storey's Schaeffer 1, (was Maher & Shira) S. Bigham sur, sp. Sinclair Prairie O&G Co.'s A. A. Seeligson 1-A, sec 71, R. P. Haldman sub, coring 3901 ft.

KARNES COUNTY—American Liberty Oil Co.'s Belknap 1, Chas. Haynes sur, ne Burnell field, completed as gasser, 1100 lbs rock pressure, 3431-36 ft; Ida Herder 1, 150 ft nel and sel 215.75-ac Tr No. 4, James Johnson sur, ½ mi nw Burnell field, dst on Pettus sand 450 lbs in 5 min, set csg, wocs. Marr & Norton's M. E. Choate 3, James Johnson & J. H. Clark surveys, dr 2575 ft. R. G. Tonkin's Miss Olive Henke 1, Seguin Gr, td 2810 ft, wait on csg to set on sand section 2150-2212 ft.

KERR COUNTY—Jeff Love & Eastland Oil Co.'s Jeff Love 5-E, sec 1591, dr 3615 ft. Meteor Oil Corp.'s C. O. Whitworth 1, HE&WT sur No. 1439, dr 920 ft.

LEE COUNTY—Humble O&R Co.'s J. Simmons 1, R. H. Hunter sur, fsh 4724 ft, part of test tool lost in hole, top Edwards lime 4717 ft. James E. Pederson's C. A. Turner 1, D. Hudson sur, td 6560 ft, pb to about 5500 ft in chalk to test.

LIVE OAK COUNTY—Baugh & McMillan's Walton & Campbell 1, D. R. Fant sur, dr 2300 ft. Brunsom et al's Nichols 1, Ayres sur, Ab 2, dr 1275 ft. The California Co.'s G. Blankenship 1, A. A. Dunn sur, sec 508, td 2666 ft, had blow-out, trying to get on bottom to dd. Henderson Coquat et al's H. E. Rex 1, GH&H sur No. 1, set sur csg, re-dr. Lion Oil Ref. Co.'s McNeill 3, Jane Curry sur, td 4450 ft, pb 4370 ft and perf csg 4315-70 ft; McNeill 4, 335 ft due s No. 1, Jane Curry sur, lcn. Smith & Storey's Frederick 1, 26 ft swl, 4100 ft nwl Jane Curry sur, dr 450 ft.

MAVERICK COUNTY—George Andrews' Matthews 1, B. C. Flowers sur, sd 610 ft, wait on wire line.

McMULLEN COUNTY — Howard & Claunch's Claunch 3, M. Hely sur, dr 475 ft. Points et al's W. Fahler 1, Pittuck sur, dr 585 ft. Hy Williams' W. L. Cox 8, James Garner sur, ow dd, now dr 925 ft.

MILAM COUNTY—Drake et al's Standard Coal Co. 1, G. L. Johnson sur, dk comp to dd from 1596 ft.

REFUGIO COUNTY—Atlantic Oil Prod. Co. & Stanolind O&G Co.'s J. M. O'Brien 3-F, Ximines sur, e side Greta field, td 6036 ft, pb 2329 ft, set 5-in csg, wocs. Magnolia Pet. Co.'s Mattie Wood 1, 330 ft sl and wl S. Turner sur, 7 mi w Refugio, lcn. Quintana Pet. Co.'s Tom O'Connor 2-B, M. L. White sur, coring below 8365 ft.

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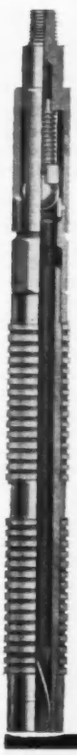
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STARR COUNTY—John H. Clepton's Roos et al 1, por 92, sd 4050 to rep machy; D. L. Tijerina 1, 150 ft nl, 785 ft wl blk 14, share 14-C, por 80, 2 mi n Rio Grande City field, dr below sur csg. Conroe Dr. Co.'s Guerra 1, J. N. Crawford sub, blk 35, por 56, td 2210 ft, twisted off 220 ft off bottom, fsh. Conway & Emanuel's Starr County Cattle Co. 1, blk 57, J-L sub, por 89, test sw 2574 ft, core deeper. Crawford et al's Hicks & Phelps 1, Pedernal Gr, sd 1615 ft to rep machy. Goodwin et al's N. Pena 1, 150 ft swl and sel of tr, share 80, por 81, Rio Grande City area. Lester & Duffield, Inc., and R. H. Vice et al's E. B. Carruth et al 1, share 1-B, por 91-92, td 4016 ft, pb 2832 ft, sd tr and re-dr to sand 2883-2917 ft, now at 2870 ft. Mitchell et al's R. G. Salinas 1, share 39, por 80, sp. Dale Sneed et al's Guerra 1, share 92, por 68, sd 235 ft. Sunray Oil Co.'s Sanchez 1, sec 344, dr 2450 ft. Van Huss et al's Garcia Land & Cattle Co. 1, por 100, coring 2767 ft.

VICTORIA COUNTY — Gulf Prod. Co.'s Keeran 7, M. de Leon sur, dr 4925 ft. Donald Moore et al's Henderson & Pickering 1, 5280 ft nwl, 330 ft nel of W. M. Rupley sur, 2 mi sw Keeran field, lcn.

WEBB COUNTY—Foster Barnsley's Webster 6, ne sw sec 685, testing 3035-50 ft, show little oil. Carolind-Texas O&G Trust's Benavides 11, ne sec 683, owdd, dr 3380 ft. O. W. Killam's A. M. Bruni 1-A, 200 ft wl, 275 ft nl blk 55, Albercas Gr, dr 1595 ft. Frank McMillan's A. M. Bruni Est. 1, 330 ft sl, 990 ft wl se sec 77, dk. Payne et al's Hoggterp 1, blk 6, sec 1110, dr 675 ft.

WILLACY COUNTY — South Texas Dev. Co.'s Armendiez 1, share 4, dr 2830 ft.

ZAPATA COUNTY—Danvers & Harrison's N. J. Vela 1, blk 7, Vela sub, por 29, coring 2253 ft. O. W. Killam's A. M. Bruni 2, 2610 ft nel, 5575 ft nwl of Barrocito Pasture, J. V. Borrego Gr, dr 1200 ft. Nordan & Morris' C. Vela 1, blk 6, re-plat por 20, sp. Joe Palmer's J. M. G. Martinez 1, blk 27, sec 434, sd 1104 ft. Venture Pet. Co.'s Ildefonso Ramirez 1, blk 1, re-plat of por 18, sp.

TEXAS GULF COAST

ANGELINA COUNTY—Koch & Duffey's L. W. Alberry 1, near Diboll, J. A. Prado sur, dr shale 2250 ft. E. B. La Rue's W. D. Ivey 1, near Huntington, Scarbrough sur, sd 1464 ft.

BRAZORIA COUNTY — Amerada Pet. Corp.'s Houston Farms Dev. Co. 1, Rattlesnake Mound prospect, L. G. Bachelder sur, washing 6987 ft. Big Creek Oil Co.'s F. Truksa B-1, s of Alvin, H&TC sur No. 7, dr 4915 ft. Luling O&G Co.'s M. J. Jamison Est. 1, 4 mi w of Angleton, C. Smith sur, dr shale 3760 ft.

BURLESON COUNTY—All wells sd.

BRAZOS COUNTY—All wells sd.

CHAMBERS COUNTY—Humble's A. Middleton 1, 6 mi e of Anahuac, H&TC sur, sec 58, woc 7027 ft. Sun's Hamilton 1, 5 mi sw of Sea Breeze, T&NO sur, sec 128, dr shale 8594 ft.

FORT BEND COUNTY—Turnbull & Irwin's Herman Hospital 1, e of Richmond, J. S. Cartwright sur, ru.

GRIMES COUNTY—All wells sd.

HARRIS COUNTY — Red Bluff Oil Co.'s Seureau 1, 3 mi w of Red Bluff, Wm. R. Harris sur, sd 6029 ft. T. S. & F. Oil Co.'s J. B. Hines 1, 1½ mi sw of Lynchburg, A. McCormick sur, no report. W. U. Paul's House 2, 100 ft n of House 1, M. Magruder sur, dr shale 1950 ft. Cockburn & Frazier's Herman Hospital 1, e of Addicks, Wm. Hardin sur, dr gumbo 3620 ft.

JEFFERSON COUNTY—Sun Oil Co.'s Long 1, sw of Nome, J. Blair sur, sdtr 8407 ft.

LIBERTY COUNTY—Liberty Independent Oil Co.'s J. M. Neal 1, se of Davis Dome, S. Strong sur, dr 3746 ft. A. L. Maxwell et al's M. P. Hincliff 1, ne of Cleveland, H&TC R.R. sur No. 105, sd 600 ft.

MONTGOMERY COUNTY—E. M. Compton's J. W. Scott 1, nw part of the county, set 7-in csg 3145 ft, woc.

MATAGORDA COUNTY — Cockburn Oil Co.'s Hawkins 6, Sheppards Mott, D. McCarthy sur, td 5803 ft. H. M. Smith Corp.'s Wadsworth Est. 1, Mad Island prospect, S. R. Fisher sur, lot 3, blk 5, dr shale 3500 ft.

POLK COUNTY—C. C. Drilling Co.'s Grandbury & Smith 1, Wm. Shadburn sur, abn 4545 ft. West Prod. Co.'s W. T. Carter 1, se of Livingston, S. Hiroms sur, dr shale 4540 ft.

TRINITY COUNTY—Marrs & McLeughlin's R. White 1, W. F. Goff sur, abd 1140 ft.

WALKER COUNTY—Boone Bros.' Tex. L. L. L. Co. 1-C, dr 1240 ft. Seaport Oil Co.'s Ross 1, w of Huntsville, Wm. Hodge sur, abd 5012 ft.

WALLER COUNTY—Stanolind O&G Co.'s Thorp 1, due w of Katy, M. Bennett sur, shut in.

WHARTON COUNTY — John Deering's Kountz 1, se of Louise, S. A. & M. G. sur, dr shale 2201 ft.

LOUISIANA GULF COAST

ACADIA PARISH—Humble's Rice Milling Co. 1, s of Crowley field, sec 27-10s-2e, dr sand 8364 ft. Woodley Pet. Co.'s Dr. Newman 1, Churchpoint, sec 24-7s-1e, sdtr 5010 ft.

AVOYELLES PARISH—Southern Star Pet. Co.'s I. G. Boyette 1, sec 28-3n-5e, dr shale 2410 ft.

CALCASIEU PARISH—Nichols McCaleb's Gray 1, 3 mi nw of Starks, sec 22-8s-13w, ru and sd. Gulf's Stark 1, s of Vinton, sec 26-11s-12w, dr shale 6760 ft. Wheeler Oil Co.'s Gabbert 1, e of Lake Charles, sec 28-9s-7w, dr shale 8250 ft (?).

CAMERON PARISH—The Texas Co.'s Jessen 1, s of Calcasieu Lake, sec 24-14s-10w, dr brown shale showing oil 7413 ft.

JEFFERSON PARISH—The Texas Co.'s Bayou St. Denis 1, se of Lafitte, sec 19-7s-24e, showing oil at 5137 ft.

JEFFERSON DAVIS PARISH—Strake Oil Co.'s Calcasieu National Bank 1, sw of Woodlawn, sec 12-9s-6w, sdtr 7848 ft.

PLAQUEMINES PARISH — Southern Sulphur Co.'s State Bay Adams 1, sec 23-20s-28e, dr gumbo 1360 ft.

RAPIDES PARISH—Reynolds et al's Barrett 1, sec 40-5n-1w, dr sand 2640 ft.

NORTH LOUISIANA

BIENVILLE PARISH — Saline Drilling Co.'s Pardee 1, ne ne 27-14n-6w, elev 162.4 ft, base Annona chalk 2508 ft, dr 2750 ft shale.

BOSSIER PARISH—Clyde French's G. Hall 1, 28-20n-13w, spd dr 75 ft. Howard & Scott's Sherrill 1, nw sw 13-18n-12w, rur. L. R. Skidmore et al's Davis 1, se se 12-18n-13w, dr 1130 ft.

CADDO PARISH—Ed Bailey et al's Hartzo 1, ne nw 28-22n-15w, rur. W. T. Bell's Bostick 1, sw sw 12-22n-16w, fsg bailer, td 2750 ft. California-Louisiana Dev. Co.'s W. E. Glassell 1, sw sw 29-20n-14w, 10-in csg cemtd 40 ft. Texas Trading Co.'s A. T. Curry 1, sw nw 28-19n-16w, elev 279 ft, showed est 1½ mil ft gas in ds test 940-52 ft sand 946-52 ft, arr set csg.

CATAHOULA PARISH — Phillipi et al's La. Cent. Lbr. Co. 1, nw se 2-9n-6e, rur to pb for shallow gas test, td 3016 ft.

CLAIBORNE PARISH—K. C. Bundy et al's J. K. King 1, 12-21n-7w, dk. J. C. King et al's Odis Webb 1, nw ne 21-21n-8w, sd 1065 ft. E. T. Oakes et al's Patton Est. 1, ne ne 1-20n-5w, dk and rog.

DE SOTO PARISH—Century Oil & Drlg. Co.'s J. M. Norton 1, sw ne 27-11n-14w, elev 244 ft, gas flow killed, 6⅝ in csg cemtd 2810 ft, td 2825 ft. Dempsey & Manziel's Thigpen 1, ne sw ne 33-13n-13w, pumping oil and water, wo gauge, td 1745 ft chalk. P. G. Frailey et al's J. E. Stell 1, 5-12n-16w, dk. Hester et al's Alston 1-A, ne sw 11-11n-16w, wocs 10-in csg 42 ft. Ramsey-DeSoto Oil Co.'s J. W. Ramsey 1, se nw 36-11n-11w, 8-in csg 49 ft, sd 210 ft. J. T. McCormick et al's Harris 1, sw se 11-12n-14w, mim. G. O. Collins' J. H. Riggs 1, ne sw 21-14n-13w, mim.

EAST CARROLL PARISH—Century Oil & Drilling Corp.'s Olivedell Pltg. Co. 1, 56-21n-12e, sd 170 ft.

NATCHITOCHES PARISH—Clyde Creighton's Friedman Est. 1, swc 52-7n-6w, dr 2304 ft. Edwards & Turner's Prudential Life Ins. Co. 1, nw nw 26-10n-6w, dk. Roy Raines et al's Fee 1, sw sw 28-9n-10w, fsg ds, td 3500 ft. Leslie Prod. Co.'s Tom Moffitt 1, se nw 19-10n-10w, lcn. B. E. Taylor's De Blieux 1, 83-10n-7w, dk.

RAPIDES PARISH—S. J. Taylor's Bentley Lbr. Co. 1, 40-5n-1w, 10-in csg 200 ft, elev 108 ft, base Jackson 2175 ft, top white lime 2968 ft, dr 3105 ft.

SABINE PARISH—Frank R. Foster, Inc.'s N. Phillips 1, sw sw nw 16-9n-11w, tested sw 3428 ft, arr deepen. M. T. Hines' J. B. Hill 1, sw ne 4-6n-11w, rur. Lawson, Leavell & Bryant's Whitney Corp. 1, (sec hole), 5-9n-13w, spd dr 1850 ft. Whitehurst et al's Logan Oil Co. 1, 3-9n-13, spd dr 1100 ft.

ARKANSAS

ARKANSAS COUNTY—Grand Prairie Dev. Co.'s Fischer 1, nw ne nw 6-6s-4e, dr 2880 ft.

ASHLEY COUNTY—J. D. Houseman et al's Bovine Farms 1, ne ne 1-18-8w, rur.

HOT SPRINGS COUNTY—R. E. Morris' Morris & Lang 1, sw sw 19-6s-17w, sd 512 ft lime (corrected depth), dr with ct.

LA FAYETTE COUNTY—W. H. Harvey's A. M. Allen 2, se sw 18-19-24, dr 1065 ft. R. F. Allen 1, ne se sw 13-19-25, lcn. S. H. Riggs et al's James Dubose 1, se nw 35-15-24, wocs 10-in csg 100 ft. Kamon & Neely's Red River Lbr. Co. 1, sw sw 26-19-25, dr 1875 ft.

MILLER COUNTY — Beverly Oil Co.'s Commercial Nat. Bank 1, sw ne se 30-17-28, lcn abn. King Oil Corp.'s E. G. Anderson 1, nw sw ne 16-14-27, 10-in csg 89 ft, dr 1290 ft. C. H. Schroder 1, sw ne 24-14-28, sd 3160 ft. C. V. Lenz's Dale 6, sw se nw 24-15-26, mim. Lee Timberlake's Frost Est. 1, sw sw se 27-15-26, dr 2395 ft.

OUACHITA COUNTY — S. J. Carnes' L. Caldwell 1, nw nw 12-14-19, 10-in csg 100 ft. P. Highsmith 1, nw ne nw 25-13-18, spd and sd. Kraft Oil Corp.'s Rath & Cartier 1, nw sw sw 32-13-17, claim so 6-in csg cemtd 1420 ft, td 1428 ft. J. D. Reynolds' Bragg 1, sw ne se 25-13-18, 10-in csg 83 ft, sd 1390 ft. J. B. Street, Tr.'s, J. M. Ashworth 1, sw nw nw 19-13-17, dk.

UNION COUNTY—Gulf Ref. Co.'s Werner Lbr. Co. 49, sw nw sw 5-16-16, spd (8000 ft test). Mrs. R. K. Jones' J. Davis 1, nw nw 28-16-14, wosr, td 2758 ft. Geo. L. Pace's Union Sawmill Co. 1, ne ne sw 24-18-12, top Arkadelphia 2025 ft, claim so 2228 ft, dr 2310 ft. E. O. Olds' Telford 1, nw sw 35-17-15, sd repr rig 1700 ft. Joe Modisette et al's D. G. Sturdivant 1, se se 6-18-13, spd cemtd 12½ in csg 190 ft (5000 ft test); Ward 1, se nw 6-18-13, spd cemtd 12½ in csg 150 ft. Raeuter Oil Co.'s Kinard 1, nw se nw 32-18-14, sd repr pumping unit, td 2189 ft; Vines 2, nw sw se 29-18-14, wosr, td 2212 ft.

MISSISSIPPI

FORREST COUNTY—Gulf's Batson-Hatton Lbr. Co. 1, se se 11-1n-13w, dr 2385 ft.

ISSAQUENA COUNTY—Pelican O&G Co.'s Martin G. Bender 1, nw nw 11-12n-8w, elev 105 ft, 7-in csg at top gas rock 3079 ft, sd, td 3227 ft.

JONES COUNTY—Snow-Black Pet. Co.'s Fox 1, se se sw 30-7n-12w, rur.

MONROE COUNTY—P. J. McAlpine et al's Crook 1, ne ne 4-13s-18w, elev 413.6 ft, set csg 1514 ft, dr to 1807 ft, water sand, pulled csg and sr, td 1807 ft.

MONTGOMERY COUNTY—D. C. Schaffer et al's Fee not given, 31-19-7w, lcn.

SIMPSON COUNTY—Berry Corp.'s J. N. Little 1, ne ne 32-10n-21e, rur.

WARREN COUNTY—Harry W. Elliott's R. L. Parker 2, nw nw 14-14n-1e, dr 780 ft.

WINSTON COUNTY—Jack Vale's Moody 1, sw nw sw 3-13n-14e, elev 540 ft, dr rock 83 ft (corrected depth.)

ALABAMA

BALDWIN COUNTY—Danciger O&R Co.'s U. S. Government 1, nw nw 1-9s-1e (parcel 2, Fort Morgan Reservation, 536-ac) cemtd 12½ in csg 200 ft, dr 1100 ft.

CONECUH COUNTY—Ray L. Estabrook's Miller Lbr. Co. 1, w½ w½ ne 1-4n-12e, elev 180 ft, top Eutaw 3100 ft, arr abn td 4800 ft.

COVINGTON COUNTY — Geomter Prod. Corp.'s A. B. Culbreth 1, sw sw ne 8-2n-14e, no report.

PIKE COUNTY—Alabama Drlg. Co.'s Faulk 1, nw nw 31-11n-21e, ru and sd.

LETTERS TO THE EDITOR

EDITOR THE OIL WEEKLY:

The article appearing in the Saturday Evening Post of February 16, 1935, under the title, "After the Oil Deluge, What Price Gasoline?" by Harold L. Ickes, Secretary of the Interior, can scarcely be permitted to go out under semi-governmental approval without challenge. Every one knows that Secretary Ickes is Oil Administrator under the Petroleum Code, and as Secretary of the Interior he has under his jurisdiction the United States Bureau of Mines and the United States Geological Survey. In view of this the absurdities, exaggerations, and gross lack of knowledge of the oil industry exhibited in that article are particularly distressing to those of us who have long believed that federal control of the oil industry was and is essential. The fact that some of the photos which illustrated that article are reproduced from the U. S. Bureau of Mines and the U. S. Geological Survey might lead that portion of the public who are unfamiliar with the oil business to believe that the article was prepared in cooperation with those two great governmental agencies whose duties include a scientific study of the oil industry. Every informed oil man will realize at once on reading the article that the text never could have been approved by either the Bureau of Mines or the Geological Survey.

To illustrate this fact: Even in these days of a reckless disregard for a few billions one way or another there is hardly an excuse for the inaccuracy of the statement that by the end of 1934 the United States had produced approximately 16,000,000,000 barrels of oil. Certainly the figures of the Department of Commerce and Bureau of Mines were available to the Secretary, and they show the production of the United States up to the end of 1934 to be 17,687,487,141 barrels.

Articles such as this, emanating from the heads designated by the Federal government to administer the petroleum code, explain in large measure the failure of that administration to receive the hearty cooperation of many in the oil business. All the weaknesses of the Oil Administration under the present set up are demonstrated in this article. It begins with the assumption that all men in the industry are crafty conspirators or fools and that all virtues, public and private, are monopolized by the immature and amateurish who have been designated to administer the petroleum code. The whole article is written on the good old dramatic theory of the villain and the hero, with the author the glamorous St. George of the drama.

The Honorable Secretary says: "I challenge any other present day industry in the United States to show greater waste in efficiency and mismanagement than seem to be inherent in the oil industry, whether of its own making or because of inadequate laws. These are grave charges, but they are less grave than the situation to which they relate." Yes, these are grave charges, and in common honesty and fairness they cannot be sustained. The industry might reply thereto that in all the history of American progress no American industry has shown greater courage, initiative, and technical advancement than has the oil industry.

Later in the article the Secretary asserts that between 1929 and the present time the number of filling stations in the United States has increased from 150,000 to 300,000. Of course, that statement is as grossly exaggerated as are some of the other statements in the article, not as to the number of stations now existing, but as to the increase since 1929, but there are approximately 27,000,000 automobiles and trucks to be served at these stations, which, if business were equally divided, would mean an average of 90 per day served by each station, and if we allow a 12-hour day as the average length of time which these stations would remain open in the 24 hours, it would mean the service of one automobile or truck every eight minutes. Certainly the country could survive with less filling stations, but there is hardly any subject connected with the oil industry about which there is more misinformation and hysterical nonsense than in this matter of filling stations. The Secretary may not like their architecture, but the traveling public does like the sanitary washroom and the modern facilities available at every high class filling station in the United States. True he can drive from Washington to Chicago, as stated in this article, and find stations close enough together that one gallon of gasoline will suffice in carrying him from station to station through the whole distance. The criticism of over-abundance of filling stations might be applied with equal force to drug stores, grocery stores, and a multitude of other activities, but for a man, one of whose multidinous duties is to expend tremendous sums for the relief of unemployment, it would be a strange method of seeking the result for him to reduce by one half the number of filling stations in the country.

Men in the production end of the industry may point with some pride to the fact that in a relatively few years they have improved its technique to such an extent that oil wells are being drilled more than two miles in depth. They might even point out that their enterprise has been such that neither blizzards nor desert heat have prevented search for oil under conditions that might well appall leaders in other lines. They might also point out that they have laid a network of oil pipe lines across this nation. And they can agree with the Secretary about how dependent almost every human activity in the United States now is upon the supply of oil and the ready and immediate service of that oil when and where needed, and they can add to what he has said by truthfully asserting that they have made this possible.

That there has been waste in the production of oil and gas none can or will deny, but this article attributes to the industry a degree of waste that never did exist. A good statistician with a good sharp lead pencil can stand on the shore of either the Atlantic or Pacific Ocean as the tide comes in and figure the essential waste of potential energy in the flow of the tide. He can prove that this great force harnessed and converted into power could replace all other sources of mechanical energy and thereby preserve the oil, gas, and coal of the country, but that would not be an indictment of all industrialists because that potential power is permitted to remain unharnessed. It is equally unfair to assume that there is a responsibility on the oil men to build up totally impractical plans for the utilization of gas energy where the practical facts make such a course impossible.

The Secretary is correct in stating that the known oil reserves of the United States—that is to say the probable recovery from every proven oil field in the United States—are sufficient only to last the nation a relatively few years. The best technical skill in the industry would probably fix that period at from 11 to 13 years.* Unquestionably this limited supply of so essential a commodity makes the subject one of major national importance and one to which the national government should address its most serious consideration. The world will not come to an end nor the prestige of the nation dwindle

*Other estimates say 75 to 600 years.—EDITOR.

"Boilers MORE EFFICIENT with LESS FUEL!"

This statement is typical of reports from Sand-Banum Users all over the country. Numerous drilling contractors and producing companies find—

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with our oil supplies. The Secretary uses the comparison of the wasteful use of the forests, and as to that waste all of us agree, but nevertheless few things were ever made of wood that we cannot equal or excel through the use of other materials abundantly available among the almost limitless resources of this nation. The factor which makes the preservation of our oil supplies tremendously important is that it will take years of time and a sum of money equal to the present national debt to convert the autos, trucks, and other oil driven vehicles of America to some other source of energy. If that change must be made too rapidly, it will become financially impossible.

It is true that great quantities of gas escape into the air in the Amarillo, Texas, field. It is not true that 400,000,000 to 500,000,000 barrels of recoverable crude oil will stick in the sands, as the Secretary says, by reason of this waste of gas. The truth is that in over 90 percent of the gas area in the Amarillo district no crude oil whatever exists in the sands, and no matter how that 90 percent of the acreage is handled in the matter of the flow of gas, it will neither add to nor subtract from the crude oil production. If the Secretary will go down on the fourth floor of the Department of the Interior Building, his Geological Survey, if they are not afraid to talk, will tell him the truth about this and the many other absurdities in this article. In this connection, it may be well to say that the answer to this waste of gas at Amarillo is not the spending of $50,000,000 of P.W.A. money to build another gas line to St. Louis, and upon its completion add to unemployment in the areas which it serves, but to return the now wasted gas to the sands. That return of the gas to the sands after the absorption plants have removed the gasoline is practical, but involves economic and engineering problems too intricate for discussion here.

As to the statement that the waste of gas in Kettleman Hills has reduced the probable recovery from that field from 2,000,000,000 barrels to one half of that amount, and the inference that this responsibility lies with the operating companies in that field, is a totally unjust accusation against said operators. Those of us who are personally familiar with that field and have driven over it repeatedly find it difficult to understand how such a charge could possibly be brought by one whose position requires that he should know whereof he speaks before addressing himself to the public. The early wells drilled in that field cost the owners approximately $500,000 apiece, and certainly no one was more greatly interested in securing the greatest possible production from that field. Only strong companies could operate there, and there was no offsetting competition to impair the proper production of that field. Maybe these boys from New York and Yale and elsewhere who sit on these numerous administrative boards would know how to produce this oil better than these companies do, but to say the least it is quite improbable.

If this article written by the Honorable Secretary were to be read only by those familiar with the oil industry, it would be entirely harmless, and might even help to temporarily dissipate the gloom of these depression days by supplying some high-class humor, but unfortunately there is danger that a great percentage of the American people will believe that an article published by the Secretary of the Interior, who also happens to be Oil Administrator, will contain nothing but well established facts. Also, no doubt, the article was timed for its effect on Congressional action on oil legislation.

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Again, it might enlighten the Secretary if he would ask his Geological Survey to explain to him how the maligned producers in the Kettleman Hills discovered that if they produced from the top of the sand in that field, which sand member is several hundred feet thick, that they got an extremely high gravity oil that evaporated quickly and made transportation without loss difficult. They later developed the practice of drilling down to nearly the bottom of the sand strata and not perforating the pipe, except that portion thereof which would set below the top couple hundred feet of the sand. Through this production practice they reduced the gravity of the oil to a degree which overcame all of the difficulties encountered in handling the higher gravity oil.

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The writer not only believes in an intelligent Federal control of the oil industry, but in disagreement with the majority of the men in the industry he believes that the national supply of oil is so limited in comparison with our future requirements that an intelligent government would encourage rather than discourage the importation of foreign oil. Those who oppose Federal control will read the Secretary's article with great pleasure, as it provides such splendid evidence of the incompetency of Federal control as it now exists, but those of us who think we know that an intelligent Federal control of the oil industry is absolutely essential to the public welfare and that control by State compacts is impractical and impossible read this article of the Secretary's with humiliation and distress.

FRED T. HOGAN,
Midland, Texas.

EDITOR THE OIL WEEKLY:

Mr. Harold L. Ickes, in an article in the Saturday Evening Post, February 16, 1935, concerning the oil industry in the United States, says:

"If the oil industry would avoid the necessity of its being declared a public utility, it would show its wisdom by joining with the Federal Government in that degree of cooperative control that would leave it the greatest possible lattitude in managing its own affairs consistent with the admitted public interest with which it is charged."

Even if we should grant that the oil industry is guilty of each of these charges, (and some of us who have been students of the oil industry do not), the "question" would remain unsettled.

It may be pointed out that, if the oil industry is wasteful, it would be wasting its own assets and not those of the taxpayers. Can any one say as much for the government?

If the oil industry is inefficient, the cost would be borne by the owners of that industry and not by the tax payers. Does anyone seriously contend that our government, with its log-rolling, pork barrels, and political appointments, constitute any example of efficiency?

If the oil industry is mismanaged, the cost again would be on the owners, whose business it is, and not on the tax payers. Does our governmental "recovery" program and constant "experimenting" provide a lesson in good management? The oil industry, at least, pays for its own experiments and some of us believe these to have been productive of more good than those of the politicians. It may be pointed out here that one test of good management is a balanced budget and not fancy names for a chronic deficit.

And isn't it true that the agitation, if any, toward declaring the oil industry a public utility, comes only from politicians, not from either the industry itself or from its customers?

It would seem that it would be better, before "jumping on" the oil industry, if our politicians would reduce the price of government and improve the quality of the product, as the oil industry has done consistently, and if they would show us an example of good management, efficiency and economy.

As to being a public utility, oil may be more necessary and useful to our industrial existence than much that comes out of Washington. The financial condition of the oil industry today, after years of severe handling, as compared to that of the railroads, might constitute a moral, so far as governmental regulation is concerned.

ROBERT DONOVAN,
Vice President and Treasurer.
Donovan Boiler Works, Inc.,
Parkersburg, West Virginia.

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3 compressors 12½" x 20",
1 compressor 14" x 20",
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Extra Compression Cylinders:
2—6¼"x20", 1—12½"x20".

Located El Dorado Field, Arkansas.

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Pittsburgh, Pa.

NEWS *from the* *Industry's* EQUIPMENT MAKERS

Minneapolis-Honeywell Elevates H. W. Sweatt to Presidency

H. W. Sweatt, for the last eight years vice president and general manager of Minneapolis-Honeywell Regulator Company, has been made president of the company, according to an announcement made public by the board of directors. He succeeds M. C. Honeywell who has served as president since the merger of Minneapolis Heat Regulator Company and Honeywell Heating Specialties Company in 1927. Mr. Honeywell becomes chairman of the executive committee.

Mr. Sweatt has been identified with Minneapolis-Honeywell for more than 20 years, acting in various positions throughout the plant and as general manager, in which capacity he will continue.

In addition to Mr. Sweatt and Mr. Honeywell, other officers of Minneapolis-Honeywell Regulator Company are: W. R. Sweatt, chairman of the board; C. B. Sweatt, vice president in charge of sales; W. L. Huff, vice president and treasurer, and C. C. Buckland, secretary.

H. W. SWEATT

The Conservation Engineering Company Changes Its Name

The Oil Conservation Engineering Company, manufacturers of Oceco tank fittings and refining specialties, and generally known to the trade as Oceco has adopted the name of its parent organization, The Johnston & Jennings Company, a 50-year old Cleveland organization with six-acre plant including iron foundry, machine shop and forge shop. It is now called the Oceco Division of The Johnston & Jennings Company.

This consolidation means a change in name only with no change in ownership or management from that which has existed during recent years. For some time Oceco has been 100 percent owned by The Johnston & Jennings Company, sharing the same plant and having the same officers.

The company announces that its customers will continue to have the manufacturing and engineering facilities of both organizations serving as a combined unit.

CLYDE GRAHAM

O-C-T Adds Clyde Graham To Field Sales Force

Oil Center Tool Company has added Clyde Graham, active in the industry in Texas and Louisiana for 15 years, to the sales staff in the Gulf Coast, with present headquarters in Lake Charles, Louisiana. Graham formerly represented Lucey Products Corporation three years in the Gulf Coast, and leaves Circle "W" Oil Company to take his present connection.

NOTE

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It may be pointed out that, if the oil industry is wasteful, it would be wasting its own assets and not those of the taxpayers. Can any one say as much for the government?

If the oil industry is inefficient, the cost would be borne by the owners of that industry and not by the tax payers. Does anyone seriously contend that our government, with its log-rolling, pork barrels, and political appointments, constitute any example of efficiency?

If the oil industry is mismanaged, the cost again would be on the owners, whose business it is, and not on the tax payers. Does our governmental "recovery" program and constant "experimenting" provide a lesson in good management? The oil industry, at least, pays for its own experiments and some of us believe these to have been productive of more good than those of the politicians. It may be pointed out here that one test of good management is a balanced budget and not fancy names for a chronic deficit.

And isn't it true that the agitation, if any, toward declaring the oil industry a public utility, comes only from politicians, not from either the industry itself or from its customers?

It would seem that it would be better, before "jumping on" the oil industry, if our politicians would reduce the price of government and improve the quality of the product, as the oil industry has done consistently, and if they would show us an example of good management, efficiency and economy.

As to being a public utility, oil may be more necessary and useful to our industrial existence than much that comes out of Washington. The financial condition of the oil industry today, after years of severe handling, as compared to that of the railroads, might constitute a moral, so far as governmental regulation is concerned.

ROBERT DONOVAN,
Vice President and Treasurer.
Donovan Boiler Works, Inc.,
Parkersburg, West Virginia.

BARGAIN

SIX BESSEMER AIR COMPRESSORS

Type 8, Sixty H.P. (13½"x20"), Direct Gas Driven, equipped with following compression cylinders:

3 compressors 12½" x 20",
1 compressor 14" x 20",
2 compressors 6¼" x 20",

Extra Compression Cylinders:
2—6¼"x20", 1—12½"x20".

Located El Dorado Field, Arkansas.

Write P. A. H.,
1104 Union Bank Building,
Pittsburgh, Pa.

NEWS *from the* *Industry's* EQUIPMENT MAKERS

Minneapolis-Honeywell Elevates H. W. Sweatt to Presidency

H. W. Sweatt, for the last eight years vice president and general manager of Minneapolis-Honeywell Regulator Company, has been made president of the company, according to an announcement made public by the board of directors. He succeeds M. C. Honeywell who has served as president since the merger of Minneapolis Heat Regulator Company and Honeywell Heating Specialties Company in 1927. Mr. Honeywell becomes chairman of the executive committee.

Mr. Sweatt has been identified with Minneapolis-Honeywell for more than 20 years, acting in various positions throughout the plant and as general manager, in which capacity he will continue.

In addition to Mr. Sweatt and Mr. Honeywell, other officers of Minneapolis-Honeywell Regulator Company are: W. R. Sweatt, chairman of the board; C. B. Sweatt, vice president in charge of sales; W. L. Huff, vice president and treasurer, and C. C. Buckland, secretary.

H. W. SWEATT

The Conservation Engineering Company Changes Its Name

The Oil Conservation Engineering Company, manufacturers of Oceco tank fittings and refining specialties, and generally known to the trade as Oceco has adopted the name of its parent organization, The Johnston & Jennings Company, a 50-year old Cleveland organization with six-acre plant including iron foundry, machine shop and forge shop. It is now called the Oceco Division of The Johnston & Jennings Company.

This consolidation means a change in name only with no change in ownership or management from that which has existed during recent years. For some time Oceco has been 100 percent owned by The Johnston & Jennings Company, sharing the same plant and having the same officers.

The company announces that its customers will continue to have the manufacturing and engineering facilities of both organizations serving as a combined unit.

CLYDE GRAHAM

O-C-T Adds Clyde Graham To Field Sales Force

Oil Center Tool Company has added Clyde Graham, active in the industry in Texas and Louisiana for 15 years, to the sales staff in the Gulf Coast, with present headquarters in Lake Charles, Louisiana. Graham formerly represented Lucey Products Corporation three years in the Gulf Coast, and leaves Circle "W" Oil Company to take his present connection.

NOTE

these points of advantage in the

NEW

"Cleveland"

THREAD

PROTECTOR

FIELD END

FLOATING THREAD

Always in compression.

Cadmium plated.

Flexible — readily conforms to various threads per inch.

SHELL

Perforated for drainage.

COUPLING END

Lugs **cast inside and slots in flange to facilitate tightening and loosening.**

Narrow Flange **prevents jars and side slaps in transit.**

Has Extension **beyond end of thread for protection before application.**

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"CLEVELAND"

for Your Own Protection

THE

CLEVELAND

HARDWARE & FORGING CO.

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CLEVELAND, OHIO

New Equipment for the Field

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Compressors

WORTHINGTON PUMP & MACHINERY CORPORATION

Worthington Pump and Machinery Corporation, Harrison, New Jersey, is offering a steam booster compressor which was designed to take steam from an existing boiler system, raise its pressure beyond the capability of the boiler itself and distribute it to points of demand. This booster has been developed to take care of situations where, as often happens, a supply of steam of higher pressure than can be obtained from the available steam sources is required.

Oil Well Cement Gauge

MARTIN-DECKER CORPORATION

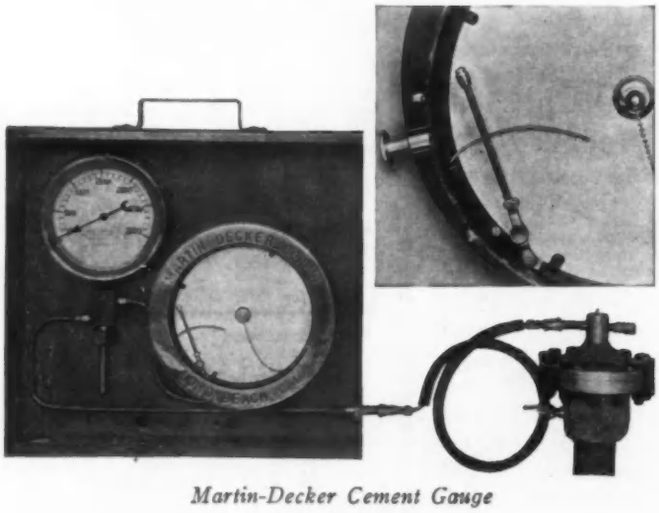
Martin-Decker Corporation, Long Beach, California, announces an instrument for recording pressures developed during cementing operations.

The recording device, which is of 3000 pounds capacity, contains a clock which turns the chart one revolution in four hours. In order that legible record may be obtained the chart driving mechanism turns faster than most recording devices and may be started and stopped at will by the operator.

When the truck is ready to run cement the clock is wound up, a new chart placed upon the recorder and the zero line placed at the point of contact of the fountain pen. As soon as the cementing operation is started the operator simply pulls out the knob on the side of the instrument. Automatically the pen is dropped on the paper and the clock starts. A record of the pressures encountered and the length of time required to put the cement away is then plotted. To eliminate pulsation the recording gauge has a pulsation damper attached.

Both the indicating and recording instruments are mounted securely in a special steel box. These boxes are mounted on the back of the cabs, or in the most convenient place on the truck.

On the back of the recording chart is provided space for writting down valuable information, such as the number of sacks of cement, the amount of water used, the amount of chemicals, if any; the size of casing, and such other information as may be needed for future reference.



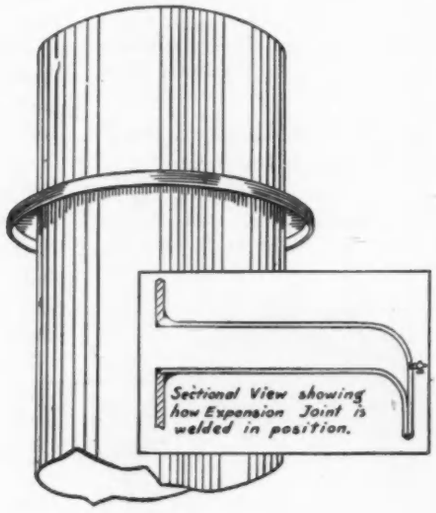
Martin-Decker Cement Gauge

Expansion Joint

HARNISCHFEGER CORPORATION

Harnischfeger Corporation, Milwaukee, Wisconsin, has announced a new type of expansion joint, made under patents held by Allis-Chalmers Manufacturing Company, the joint representing an ingenious method of caring for expansion in a long pipe line. The joint is provided with flanged connections which permit enough flexibility to prevent distortion of the pipe under longitudinal stresses.

The joint recently was used to provide for expansion in the huge air duct just completed for the Milwaukee Sewage Disposal Plant at Jones Island. This large installation, comprising a tube of "Plykrome," a stainless clad steel, ranging from two to five feet in diameter, was assembled in 54-foot lengths and welded into a continuous tube 1800 feet long.



Expansion Joint

This new type of expansion joint occurs at intervals of 54 feet, with the flange or collar protruding from the outer edge of the pipe from 4½ to 6 5/16 inches, depending upon the variable diameter of the tube. The pipe connections are separated by a one-inch air space, enough to care for expansion and contraction under the most severe temperature changes.

The tube carried 100,000 cubic feet of air per minute under a pressure of 10 pounds per square inch, and perfectly welded joints were necessary to prevent leakage. The Cream City Boiler Works, using P&H Hansen welders, completed fabrication and installation of the pipe.

Welder

THE IDEAL ELECTRIC & MANUFACTURING COMPANY

The Ideal Electric & Manufacturing Company, Mansfield, Ohio, has announced development of an entirely new design of arc welder featuring unity power factor motor drive, 10 to 15 percent better over-all efficiency than conventional machines, and an extremely fast arc with a fast recovery speed, the manufacturer claims.

A unique arrangement of generator windings utilizing a separate auxiliary differential field structure produces an improvement in welding performance, it is claimed. Oscillograph tests show recovery from short circuit to normal welding current in less than 0.01 of a second, which is about 30 times as fast as conventional speed of recovery. Also, the Noel "Speed Arc" welder is the only welder that will maintain its current and voltage settings when started up cold and run full load for any period desired, the manufacturer states. The temperature rise of the machine has no effect on the current and voltage settings in this welder.

The welders provide both 25 and 40 volt operation by a simple adjustment of the controls. This permits the use of the new improved high speed coated rods, as well as standard uncoated rod, and also allows copper arc and carbon electrode work—all on the same machine.

Grinding Attachment

LANDIS MACHINE COMPANY

Landis Machine Company, Waynesboro, Pa., is offering a tap chaser rake grinding attachment, a fixture for use in regrinding or sharpening the chasers used in the company's Style LT and LM receding chaser collapsible taps.

The attachment is composed of three main parts, consisting of a base which is adapted for fastening to the table of most makes of tool and cutter grinding machines; the swivel bracket attached to the base; and a vise base which is clamped to the swivel bracket to hold the chaser while being ground. The swivel bracket is adjustible in a horizontal plane in relation to the base. The vise base can be rotated in the vertical plane and securely clamped at any angle as determined by graduations on top of the swivel bracket. This permits setting the chaser at the proper elevation for grinding the gup tap in the throat section of the rake.

Pumping Drives

FOOTE BROS. GEAR AND MACHINE COMPANY

Foote Brothers Gear and Machine Company, Chicago, has announced the "IXL" line of deep well pumping helical gear drives for operating walking beam pumps. The drives were designed and engineered to meet the existing conditions encountered in the East Texas and Oklahoma City fields. As the result of an extensive survey of pumping conditions in these fields, the line of pumping drives was developed.

The manufacturer claims the line of oil well pumping gears are not just standard industrial gear units, but that it was designed to withstand the heavy duty imposed by this type of service. They are designed with a large safety factor, and have heavy duty gears and oversize bearings, all mounted on a semi-steel ribbed case. The crankshafts are made of molybdenum nickel steel alloy. There are no shoulders on the shaft to cause localized stresses.

The oil pumping drives are made in two types, the Type SXO single reduction unit, and the Type DXO double re-

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LOS ANGELES, CALIF.
415 Petroleum Securities Bldg.

(U. S. Patent 1,962,634 and others pending).

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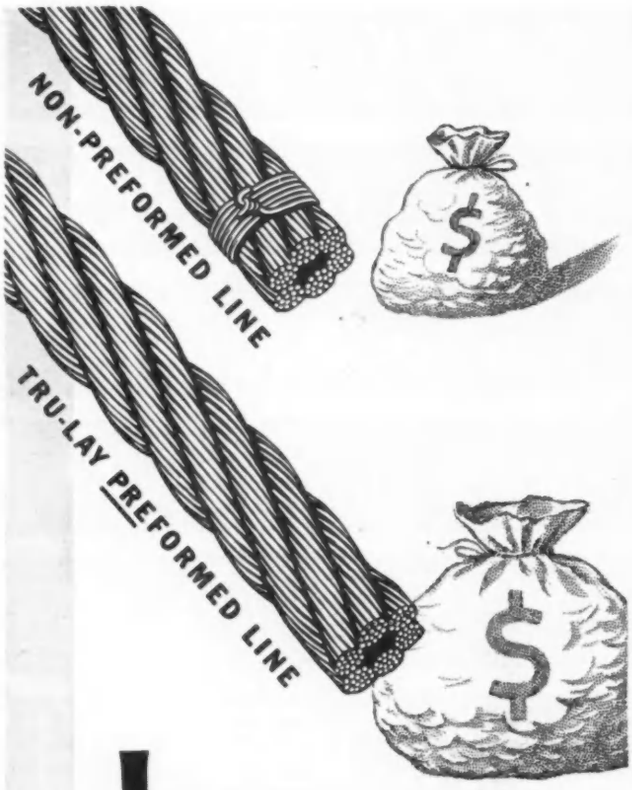

Longer service means larger profits!

Drillers everywhere are learning that they can cut their drilling costs with Tru-Lay Preformed Rotary Lines. Naturally, that means larger profits.

Tru-Lay Preformed Rotary Lines give longer service because, being preformed, the lines are free from internal stress—so costly and crippling to line service. Being preformed Tru-Lay Rotary Lines do not have to be backtwisted. They spool tightly and rapidly even under light weight. They do not whip so much at high speeds. They thread more easily through the traveling block, crown block and eye in drum. All of which means *Tru-Lay Preformed Rotary Lines return a larger profit.*

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TRU-LAY *Preformed* ROTARY LINES

duction unit. Both types can be furnished with double extended slow speed shaft for twin crank drives if desired. All units are provided with fly wheel and brake. The single reduction units are available in six sizes in ratios from seven to one up to 9.666 to one, and in capacities from 10 to 85 horsepower at 20 strokes per minute. The double reduction units are available in four sizes in ratios from 33.4 to one up to 35.2, and in capacities from 10 to 50 horsepower at 20 strokes per minute.

Meter Panel

BAILEY METER COMPANY

Bailey Meter Company, Cleveland, Ohio, has announced a cabinet type steel meter panel equipped with doors to protect and conceal meter and control connections. The paneled doors are provided with a three-point locking mechanism and a substantial cylinder lock. The panels are made of one-piece sheet steel plate formed in sizes to give a neat appearance.

Arkansas Coastal Geology Is Discussed in New Book

"Oil and Gas Geology of the Gulf Coastal Plain in Arkansas" is the title of a book just issued by the Arkansas Geological Survey of which George C. Branner is chief geologist. The book was prepared by William C. Spooner, consulting geologist of Shreveport, Louisiana.

The book contains 548 pages and is cloth bound. It is divided into three sections. The first is a discussion of the geology of the Gulf Coastal Plain in Arkansas; the second deals with the various producing fields of Arkansas; and the third is a discussion of the geology and oil or gas possibilities of each county with a list of all the tests drilled in each county. Structure maps, detailed well sections, and rate cumulative curves are given.

According to the publication for the 14-year period ending with 1934, approximately 420,000,000 barrels of oil were produced in that state.

Mid-Continent Oil and Gas Forms Offered in New Book

Mid-Continent Oil and Gas Forms is the title of a hand book for oil men. It contains explanatory notes and paragraphs stating how and when to use the forms. The book, which is the third printing, is limited to 1000 copies, has 257 forms. The 352 pages are indexed and presented in a flexible cover.

Each of the five states of Texas, Oklahoma, Kansas, Louisiana and Arkansas has a complete set of forms. They are simply arranged and the explanatory notes are written in a clear, concise manner, easily understandable. It contains many contracts and agreements used by the larger companies.

The forms for each state were compiled by a lawyer thoroughly familiar with the law of oil and gas, legal forms, usages and every day problems of the state.

Among other forms are the following: acknowledgements; geology; brokerage; powers-of-attorney; contract to buy; options; escrows; lease; assignments; royalty; drilling; production liens; chattel mortgages; title curative; warranty deeds; mortgage and commercial leases.

The price is $7.50 and is obtainable through The Gulf Publishing Company, 3301 Buffalo Drive, Houston, Texas.

Squeaks *from the* BULL WHEEL

"What is a budget?"

"Well, it is a method of worrying before you spend instead of afterward."

"How did you make your neighbor keep his hens in his own yard?"

"One night I hid a half dozen eggs under a bush in my garden and next day I let him see me gather them. I wasn't bothered after that."

Wife: "Where have you been all the evening?"

Husband: "At the office."

Wife: "Then you must be made of asbestos. Your office building burned down three hours ago."

Judge: "What, are you here again? Aren't you ashamed to be here?"

Prisoner: "No, sir. What's good enough for you is good enough for me."

"I sent my little boy, Johnny, for five pounds of apples, and you only sent four and a quarter pounds."

"My scales are right, madam. Have you weighed your little boy?"

"I've decided to become a vegetarian."

"Did the doctor advise it?"

"No—the butcher. He won't give me any more credit."

"Do you like filet mignon?"

"I dunno. What race is she running in?"

"Not a day passes but my wife shows her incompatability."

"Ain't it a crime th' way women dress these days?"

"Did you ever eat any horsemeat?"

"No, I always remember the fate of poor Dugan when he was in the war. He was eating some horsemeat in France when someone said 'Whoa!'—and he choked to death."

"I saw you put your arm around my daughter!"

"And I suppose you noticed how she struggled?"

The Sheik: "Through the Sahara's worst sandstorm I have come to thee, Nellie."

Sheikess: "Aye, Rodolph, surely thou must be a man of grit."

"Dere goes dat slatternly Mandy Jackson wid her ten pickaninnies. She sho do look repugnant."

"Lan sakes! Again?"

A friend spent the night with a farmer. The next morning he appeared downstairs with a black eye.

"How did you get that?" asked the farmer in surprise.

"Oh, I just happened to fall in the guest chamber, that's all," answered the visitor.

"Gee! you didn't break it, did you?" anxiously inquired the farmer.

"Waitress, do you stuff olives here?"

"No, I don't, but I fill dates."

Author: "I've got a good tale here about a man and two women on a desert island."

Editor: "Good heavens, man, that plot's as old as the hills."

Author: "Not this one—these women are his wife and his wife's mother!"

Mrs. Newedd entered the dining room and proudly placed the turkey on the table.

"There you are, dear, my first turkey!" she exclaimed.

Mr. Newedd gazed with admiration at the bird's shape.

"Wonderful, darling!" he said. "How beautifully you have stuffed it!"

"Stuffed!" she echoed. "But, my dear, this one wasn't hollow."

"Dear, this is heaven."

"Well, I'm not a harp."

An old colored preacher over in Virginia was noted for his use of six-cylinder words, many of which he did not always understand himself. He startled his congregation one morning with this announcement:

"Brethern an' sistern, pay me strick mind, foh I'm erbout to 'nounce. Nex' Sunday—dat is one week from dis day—dar will be a mos' importunate celebration in dis congregation. An' I wants all ob you to be on han' to witness de holy doin's, foh I's gwine ter baptize nine adults and sixteen adultresses."

A New Slant on GANGDOM!

According to this fellow Webster who sets himself up as an authority on words, a Gang can be something other than people working together criminally. In his next unabridged edition we hope to see "Gang, Pelco" listed and described something like this: A group of men working together for the last twenty-five or thirty years to give the oil industry improved supplies and equipment for its operations in Louisiana, Arkansas, Texas and Gulf Coast fields. Regarded by many oil men in the area mentioned as Public Friend No. 1.

The PELCO Gang

PELICAN WELL TOOL & SUPPLY COMPANY

. . . . SHREVEPORT, LOUISIANA

Lake Charles—Converse—Many
Monroe—Houma—Kilgore
Willow Springs

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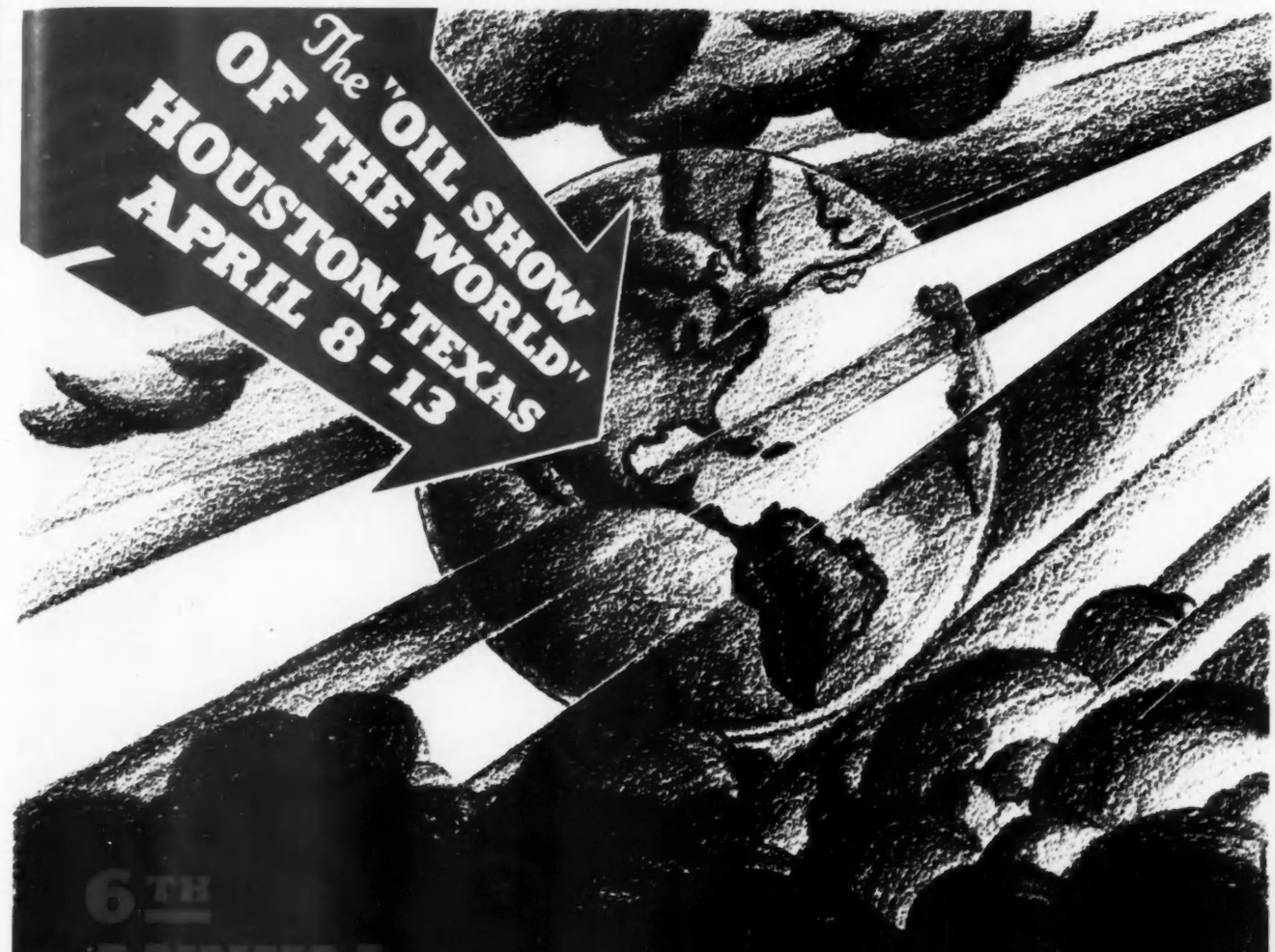

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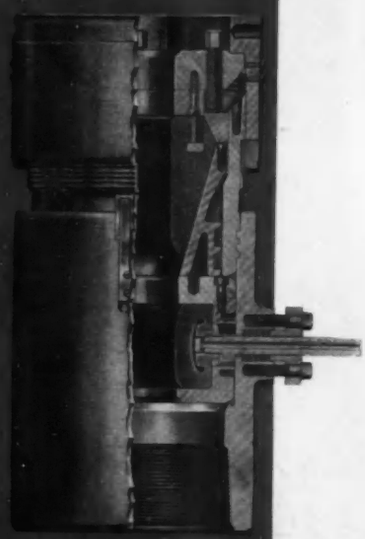
on the casing at the surface above the master gate. It seals the hole during all drilling and casing operations.



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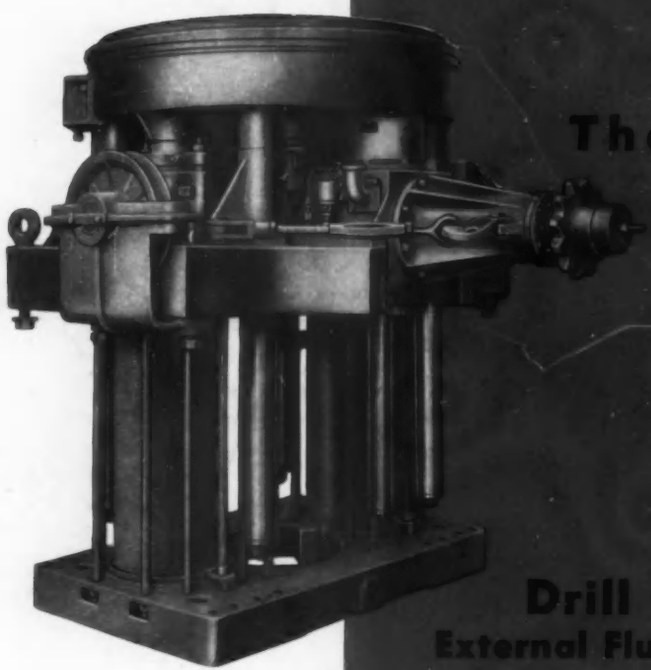
Pat., Other Pats. Pend.



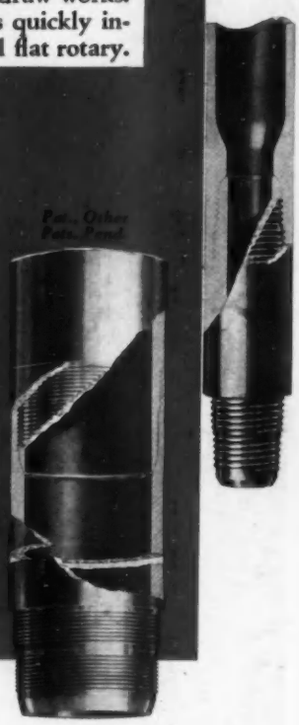
The HYDRIL Hydraulic Rotary

accurately controls bit pressures at any rate of feed and moves drill pipe or casing up or down independently of the draw works. Equipped for chain drive, it is quickly installed in place of conventional flat rotary.

Hydril Hydraulic Rotary with sprocket for chain drive for use with any chain driven draw works. When used with Hydril Six-Speed Draw Works the Hydraulic Rotary is shaft driven.

Drill with HYDRIL External Flush Joint Drill Pipe

Once the Combination Drilling Packer has been adjusted about this drill pipe it does not have to be loosened again while running in, drilling or pulling out of the hole.



Pat., Other Pats. Pend.

Internal and External Flush Casing Joints

pass through the packer freely. Their use makes it possible to run casing under pressure with the utmost safety and speed.

Hydril External Flush Drill Pipe Joint (above). Hydril Internal and External Flush Casing Joint (below).

Trade Mark Reg.

HYDRIL

HYDRIL COMPANY

714 West Tenth Street, Los Angeles, California

Doheny Stone Drill Company, of Texas

4300 Calhoun Road, Houston, Texas